DOCUMENT RESUME

ED 286 510 IR 052 115

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TITLE Collection Building vs. Document Delivery: An Evaluation of Methods To Provide NTIS Documents in an Academic Engineering Library.
PUB DATE 1 Jun 87
NOTE 82p.
PUB TYPE Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Academic Libraries; Comparative Analysis; *Cost Effectiveness; Efficiency; Higher Education; Library Collection Development; Questionnaires; Records (Forms); *Scientific and Technical Information; *User Satisfaction (Information); Use Studies
IDENTIFIERS *Document Delivery; *National Technical Information Service; University of Texas

ABSTRACT

This report describes a study designed to evaluate and compare the provision of National Technical Information Service (NTIS) documents to users of the McKinney Engineering Library at the University of Texas through Selected Research in Microfiche (SRIM), a standing-order, collection-building service, with the provision of documents through QuikORDER, an online, on-demand, document delivery service. The factors of use, cost, and effectiveness of both methods are examined through a review and interpretation of actual cost and usage data; and it is concluded that, despite slower turnaround time, QuikORDER document delivery is more cost-effective than SRIM collection building and should remain reliably cost-effective over the next 20 years. Recommendations are presented for continuing document delivery and for measuring and documenting user satisfaction with the document delivery system to identify areas for future improvement. Nine appendices include: (1) graphic presentations of additional data from the NTIS document delivery program; (2, 3) information about NTIS and QuikORDER; (4, 5) samples of resources used to measure the cost of the SRIM and NTIS services; (6) correspondence between the University of Texas and NTIS; (7) an NTIS fill rate survey and a sample NTIS citation; (8) interview summaries; and (9) a study status report. (KM)

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ED286510

Collection Building vs. Document Delivery: An Evaluation of Methods to Provide NTIS Documents in an Academic Engineering Library

submitted

by

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June 1, 1987

IR052115

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Backround

The McKinney Engineering Library at the University of Texas historically has supported a technical report collection. These documents, usually the product of government-contracted research and development, fulfill a unique information need in the technical-research community. Few other forms of technical literature have both the focus of reporting of highly specialized applications of technology and the wide range of subject coverage that technical reports have.

The library relies on the National Technical Information Service (NTIS) for its acquisition of technical reports that don't originate from NASA or DOE[1]. NTIS serves as the central source for the public sale of U.S. government-sponsered research and maintains a policy of keeping technical reports "in print" indefinitely. NTIS offers its patrons a range of purchasing options from title-by title selection to a standing order service called SRIM (Selected Research in Microfiche).

SRIM is a microfiche service, issued twice monthly, that automatically selects and distributes full text reports in the technological, sociological, scientific, engineering, or business-related subject categories determined by the customer. There are nearly 400 primary and secondary subject categories to select from, ranging from biotechnology and transportation to business, finance and communications. The Engineering Library has been a SRIM participant since 1982.

[1]Observing that reports issued by these agencies were consistently more heavily used, the Engineering Library's bibliographer elected to receive the maximum amount of non-proprietary, non-confidential reports from both these agencies in purchases independent of NTIS.

Events Leading Up to the Study

In 1986, the Engineering Library was affected by an unexpected, perhaps hastily mandated cancellation of its SRIM subscription as part of a General Libraries serials cut. The flow of NTIS reports would stop, and the library faced decisions about whether 1) to pass the cut onto users by, in effect, saying "we do not supply these documents any longer," or 2) to devise and implement a means to provide documents that would both satisfy the user and the cost-reduction requirements of the library administration. The library creatively responded to its dilemma by 1) maintaining receipt of reports issued by the two major agencies, NASA and DOE and, 2) initiating a pilot program to provide on-demand document delivery of NTIS reports not "in stock" at the library.

Under the pilot program, reports are ordered online through direct dial-up to NTIS's QuikORDER service, a facility designed to minimize turnaround time and provide online verification of document availability and price. Documents are sent directly to the Engineering Library, which at that time patrons are notified of document arrival or are directly sent the document.

The dust has somewhat settled since the sudden and total elimination of the SRIM subscription, and since the NTIS document delivery test period was initiated (26 weeks ago). When the decision to pilot an on-demand document delivery service was made, estimations of the cost, usage, and trends of the new program (document delivery) as well as of the old program (SRIM collection building) were basically "felt" and never measured quanitatively. It was known, for example, that on a cost per unit basis the SRIM acquisitions were approximately 1/3 that of individually ordered titles. SRIM "appeared" to be more cost-effective, in fact, a real deal.

Other notions, however, indicated that there might be a problem underneath all that "cost-effectiveness." Anecdotal observations by the reference staff produced

perceptions that the NTIS document fill rate at the library was not proving to be so effective. The sense that diverse demands on the collection were out-stripping the resources to anticipate and satisfy such demand was growing. Given the volume of reports that NTIS distributes annually (70,000) and given the limited resources the library had to select (enough for less than 10,000 reports), it was wondered whether accurately anticipating need in a situation like this (ie. achieving a high fill rate) might simply be an impossible task. In sum, there appeared to be conflicting signals as to the "better" program to support given all factors -- use, cost, and effectiveness.

Purpose of the Study

The study seeks to evaluate and compare both methods of providing NTIS documents to users. Factors of use, cost, and effectiveness of both methods are examined through a review and interpretation of actual cost and usage data . The focus and purpose of the study is specified through the following objecives:

1) To determine the cost-effectivenss of both the SRIM collection-building program and the NTIS document delivery program so that informed decisions may be made to either:

   A) Continue the current document delivery service,

   B) Discontinue the document delivery program in favor of campaigning for a return to the SRIM program, or

   C) Modify the current document delivery program so as to create a "hybrid" of both programs.

2) To cost-model the future of both programs so as :

   A) to assess the library's ability to sustain one program better than the other given its overall costs and cost-effectveness,

   B) to gage the over-time impact on demand for document delivery by of halting collection growth, and

   C) to assess cost-effective dynamics of a SRIM collection built over a longer span of time.

3) To offer insights gained by this "test" situation to to other, similiar situations where access issues pit collection building against alternatives. The study could be made available for the evaluation of similiar programs elsewhere in the organization or to external parties.

4) As a by-product of achieving the objectives above, the study intends to also:

   A) examine current procedures of the document delivery mechanism and recommend improvements, and

   B) to document procedures of the the document delivery mechanism.

Major Findings and Recommendations

1) Document delivery proves to be a far more cost-effective approach over SRIM collection building, even though the opposite may appear to be true given per unit costs. Unit costs of document delivery is 6 1/2 times that of SRIM, but costs per use puts SRIM at nearly 3 times that of document delivery. Because the technical report collection experiences such scattered and wide-ranging use, it becomes very difficult and costly to anticipate such demand through collection building (see APPENDIX A).

2) Document delivery should be continued over the other potential alternatives of 1) campaigning for a return of the SRIM subscription, and 2) modifying the total program to form a "hybrid" of document delivery and a limited SRIM subscription. Recommendations do include the monitoring of future usage patterns with regard to what agency's publications are being sought. If, for example, requests for EPA or FHWA publications climb much higher than at current levels, consideration should be given to a limited SRIM dissemination of publications of those agencies. This could be cost-effective given the relatively affordable (under SRIM) amount of publications emerging from both organizations (see APPENDIX B, p. 5).

3) Document delivery should remain reliably cost-effective over the next 20 years. The impact of a no-growth NTIS collection will not be nearly as heavy on the demand for document delivery over time as it may have appeared at first. Cost per usage and per unit costs should be steadily contained, while total annual costs will increase only 19% over the next 20 years.

   The cost-effectiveness of a long-term SRIM-built collection would improve over time, but its total annual cost will remain 4 to 5 times that of document delivery, and cost per use will be still be double that of document delivery at its lowest, achieved rate.

4) Of the major criteria for evaluating for programs -- cost, fill-rate/availability, and turnaround time or (time between patron wanting the document and getting it), turnaround time is the only, major weakness of the document delivery program. Recommendations include the implementing an enhanced service level that would provide RUSH delivery of documents to patrons by means of a partially user-subsidized arrangement. All other means to expedite delivery of documents is either incompatable with library policy or being controlled externally.

5) It is recommended that user satisfaction of the document delivery service be measured, documented, and used to identify areas for future improvement.

Comparative Analysis of :

SRIM Collection Building

&

NTIS On-Demand Document Delivery

Definition of Terms

Document Delivery -- the service of accepting requests for technical reports not owned, verifying availability of reports, transmitting a request for purchase of a copy of the report, receiving it, notifying the patron or sending the report copy to the patron when it has been received; includes payment of all fees associated with the transaction.

Availability Rate -- the percentage of sought documents that can be reliably delivered to a requesting patron, given adequate time, from any accessible sources (internal or external).

Fill Rate -- the percentage of sought documents that the library will have available for immediate use.

Turnaround Time -- the number of calendar days (includes weekends and holidays) between the day a request for document was transmitted to NTIS and the day it was received from them.

Direct Costs -- costs for goods and services for which the library or university is billed.

Indirect Costs -- services for which the library or university is not billed, but which is performed by existing labor; usually implies the cost of existing labor to perform some task or service.

Absorbed Cost -- labor to perform tasks and services considered to be within the bounds of established service policy, and therefore, not considered to present an additional cost burden.

SRIM -- Selected Research In Microfiche; an NTIS standing order microfiche dissemination service that enables the customer to automatically receive full text of only those reports relating to customer-determined requirements. Customer can establish a profile based on broad subject categories or specific subcategories, or by issuing agency.

Technical Report -- a document conveying the status, progress, or final results of a scientific or technical investigation to the contracting entity. The technical report is usually more detailed than an article or presented paper, and will usually contain sufficient data to enable the qualified reader to evaluate the original research or development.

Summary of Data Collection Sources and Activities

-- NTIS Document Delivery Test Period

- Nov. 1, 1986 to April 27, 1987
- Population=132
- see APPENDIX A, C-17

-- Technical Report Collection Fill Rate Survey (also known as "NTIS Survey")

- March 30, 1987 to April 30, 1987
- Population=34
- see APPENDIX G

-- Microfiche Filing and Handling Measurement

- Population=37
- see APPENDIX D-2

-- Interviews and Informal Surveys

- Susan Ardis; Head, Engineering Library (see APPENDIX H)
- Larayne Dallas, Assistant Librarian, Engineering Library
- Tim Jorgenson, Reference Assistant, Engineering Library
- Chris Hartung, NTIS Office of Computer and Communication

--NTIS Deposit Account Invoices (see APPENDIX D & E)

Assumptions and Limitations of the Study

1) Time constraints of the study limited the sample size of the NTIS Fill Rate Survey (this survey measured the fill rate of the existing collection).

In concern for the accuracy of the sample, reference staff members were interviewed independent of each other and without knowledge of the survey results as to their observations of the collection fill rate. From four staff members the range of response said 25 - 40% of the time patrons will find the title they are seeking. Tim Jorgenson, reference assistant who likely has more contact with NTIS-seeking patrons than any other staff member, cited a 30 -33% fill rate. The survey measured a 29.4% collection fill rate.

This empirical corroboration of the survey holds added weight because of the reference assistance regularly required to identify and locate technical reports. For example, reports commonly are assigned several numbers -- one for the producing agency, one for the contracting agency or agencies, and often one for the agency distributing the document. Superintendent of Documents Numbers also frequently appear on these reports. In addition to its microfiche format and special filing arrangements, these are compelling reasons for patrons to require reference assistance in seeking reports. And they do. Because of it, staff members are often present to realize a success or failure in locating a sought document.

2) Future cost models required the assumption that cost, the dollar, and patron demands for technical reports remain constant over the period being projected upon. This assumption was consistently applied so as to avoid any biases that would develop between methods under evaluation.

3) A measure of user satisfaction of the document delivery pilot program was beyond the scope of this study, but has been recommended as a future activity.

"Collection Building" Method of Providing Technical Reports :

Procedure Narrative

(see Figure 1 for corresponding diagram)

1. Engineering bibliographer selects/adjusts NTIS SRIM categories, and establishes direct distribution of publications from NASA and DOE (absorbed cost).

2. NTIS distributes technical reports on microfiche bimonthly [direct cost]. Boxed microfiche is received at PCL, and routed through Library Mail to the Engineering Library .

3. Microfiche is rough-sorted, fine-sorted, and filed (indirect cost).

4. Patron seeks report; often requires reference assistance to identify and locate report number (absorbed cost).

5. Patron/staff determine if sought report is owned at Engineering (absorbed cost).

6. If not owned, patron is on his own; staff can determine if report is available through NTIS and can refer patron to NTIS for personal acquisition of document (absorbed cost).

7. If owned, patron may use in-house, or check item out of library (absorbed cost).

8. If checked out, patron returns borrowed items (absorbed cost). Go to Step 3.

Method of Providing Technical Reports 1982-86: Collection Building

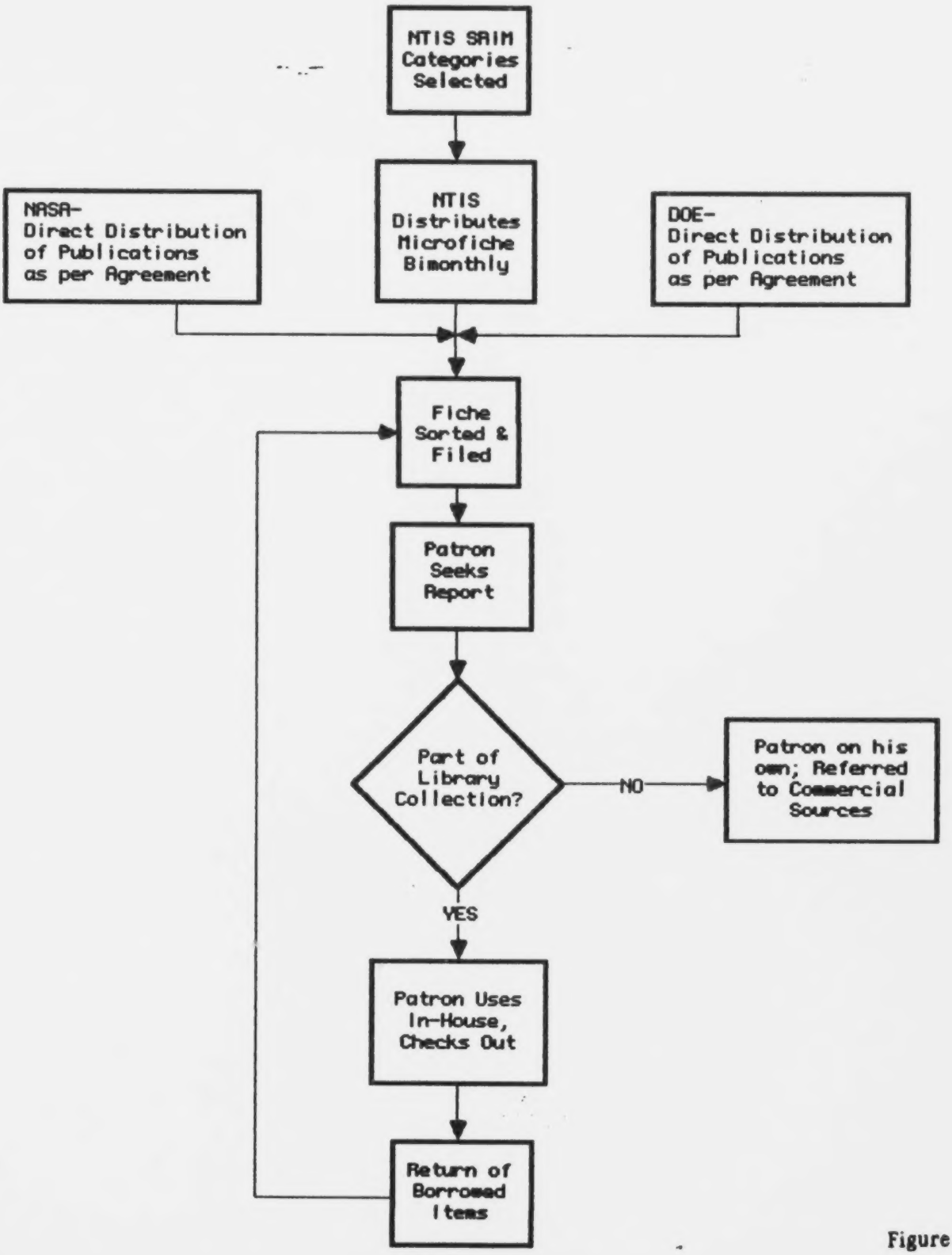

NTIS SRIM Categories Selected
NTIS Distributes Microfiche Bimonthly
NASA- Direct Distribution of Publications as per Agreement
DOE- Direct Distribution of Publications as per Agreement
Fiche Sorted & Filed
Patron Seeks Report
Part of Library Collection?
NO
Patron on his own; Referred to Commercial Sources
YES
Patron Uses In-House, Checks Out
Return of Borrowed Items

Figure 1.

"Document Delivery Method of Providing Technical Reports :

Procedure Narrative

(see Figure 2 for corresponding diagram)

1. Patron seeks report; often requires reference assistance to identify and locate report number (absorbed cost).

2. Patron/staff determine if sought report is owned at Engineering (absorbed cost).

3. If owned, patron may use in-house, or check item out of library (absorbed cost).

4. If not owned, staff determines is report is available through NTIS (absorbed cost).

5. If document is not available through NTIS, patron is referred to Inter-Library Loan (absorbed cost).

6. If document is available through NTIS, patron is informed of document delivery service and asked if he wants document ordered for him (absorbed cost).

7. If patron does not want library to order report, service ends. If patron wants library to order report, patron is asked as to what level of service speed is required (absorbed cost).

8. If RUSH service is required, patron is asked to present an IDT (Inter-Departmental Transfer) number. If patron presents number, patron fills out document delivery request form. If patron does not present IDT number and RUSH service is still required, patron is referred directly to NTIS RUSH service for personal acquisition of document at needed service level (absorbed cost).

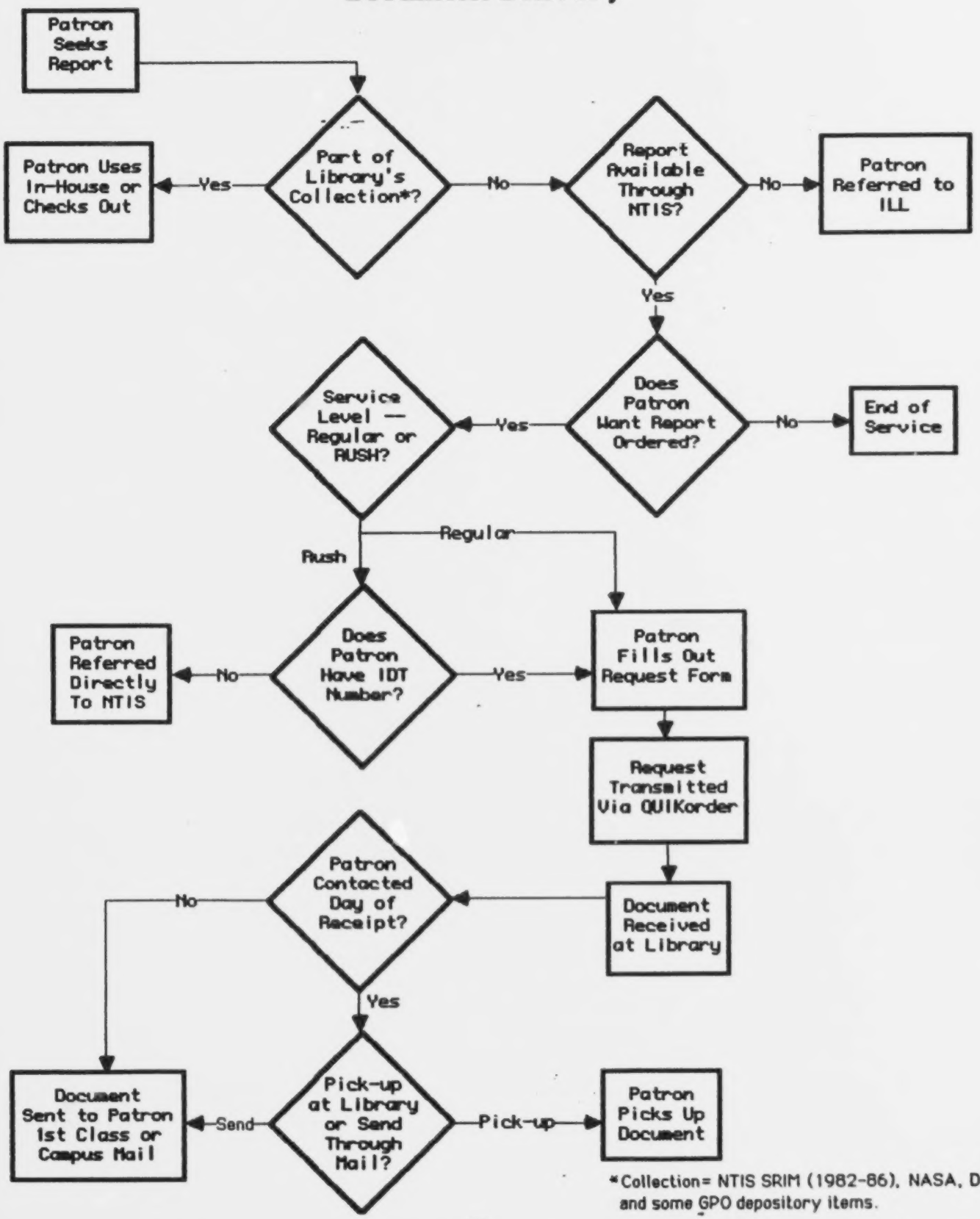
9. If Regular service is acceptable, patron fills out document delivery request form.

10. Request is transmitted directly to NTIS via QUIKorder (indirect and direct costs), and document is individually purchased (direct cost), (see APPENDIX C).

11. Document is sent via 1st Class Mail and is received at library.

12. Library staff attempts to phone-contact patron the same day document is received (indirect cost). If patron is reached, he is asked whether he wants to pick document up at the library or have the library sent it to him through the mail. If patron is not reached that day, document is sent to patron through the mail.

Method of Providing Technical Reports 1986-87:
Document Delivery



*Collection= NTIS SRIM (1982-86), NASA, DOE, and some GPO depository items.

Figure 2.

Recommendations for Document Delivery Procedures

The problems encountered with the document delivery mechanism were few and most can be treated by a new, clearer design of the form patrons fill out when requesting a document (see following page for new form design). Below is a listing of problems identified and changes recommended.

Problem

There was some patrons who were surprised to learn that the documents ordered for them would be ordered in microfiche form only (paper costs are prohibitive).

Treatment

State at the top of the order form that documents will be ordered in microfiche only. Instruct patron of alternatives if hard copy is required.

Problem

Some patrons could not be reached by phone when their document arrived, or for several days after it had.

Treatment

New form design should include both telephone number and address. Patron should be telephoned day of document's arrival. If patron cannot be reached after initial try, document should be mailed same day.

Problem

A few patrons were frustrated by the prospect of a two-week turnaround time.

Treatment

Offer patron a partially user-subsidized RUSH service level that would guarantee a turnaround time of 2 to 7 days. Establish mechanism to allow patron to subsidize the RUSH level service through an IDT (Inter-Depatmental Transfer). Modify request form to accept multiple service levels.

NTIS Order Form

Documents will be ordered by the library in microfiche form only.
Orders will arrive in approximately 2 weeks.

Name_____ Address_____

Student_____ Faculty_____ Staff_____ Tele.#_____

Dept_____ Date _____

DOCUMENTS REQUESTED (limit 5): IDT # _____

NTIS Accession #'s	RU	Report Title
1)_____	☐	_____
2)_____	☐	_____
3)_____	☐	_____
4)_____	☐	_____
5)_____	☐	_____

Date Ordered _____

NTIS Control Number_____

Date Received _____

Notes:

Cost Analysis of NTIS SRIM Collection Building
-- 1982-86 --

Data Collection and Measurement Activities

- Copies of the monthly invoices of NTIS SRIM charges were obtained from both General Libraries Acquisitions and NTIS Accounting (see APPENDIX E). Charges for years 1983-86 were obtained, mean annual cost of SRIM distribution was calculated.

- Microfiche filing activities were measured and unit cost-factored (see APPENDIX E). Seven different individuals performing three different, but related tasks were timed for a total of 37 hours. Rates per hour (including supervision) for each activity were calculated, then costs per unit were derived.

Factors Used in Cost Calculations

Microfiche Filing

- Mean number of microfiche titles rough sorted per hour -- **340.3**

- Mean number of microfiche titles fine sorted per hour -- **585**

- Mean number of microfiche titles filed per hour -- **143.3**

- Rate of supervised labor to perform microfiche sorting and filing-- **$4.50/hr.**

- Per title cost of all microfiche handling and filing activities -- **$0.0523**

SRIM Acquistions

- Mean annual expenditure for SRIM distributions -- **$11,747.34**

- Mean number of titles received annually via SRIM -- **9400**

- Cost of each title purchased through SRIM -- **$1.25**

Annual and Unit Costs of NTIS SRIM Collection Building

Annual Costs

SRIM	$11,747.34
Filing and Handling	$491.62
Total	**$12,238.96**

Unit Costs (per title)

SRIM	$1.25
Filing and Handling	$0.05
Total Cost per Title	**$1.30**

Cost Analysis of NTIS Document Delivery
-- 1986-87 Test Period --

Data Collection and Measurement Activities

- Monthly NTIS invoices were retained to determine per document cost for document (see APPENDIX E).

- Library's order records and NTIS invoices were cross-checked to determine the mean number of documents ordered per session. NTIS imposes a per order session charge. Mean order session charge per document was calculated.

- Copies of long distance phone charges during the test period were obtained for the consideration of telecommunication charges of ordering online (see APPENDIX E). Mean length and cost of phone charges for each order session was calculated.

- Online ordering activity was timed to determine mean labor cost of the ordering activity per document.

- Patron contact activity was timed to determine mean labor cost of contacting and delivering document to patron per document.

- Cost of material supplies involved in the document delivery activity was determined.

Factors Used in Cost Calculations

NTIS Charges

Price per document -- **$6.50**

Order charge per ordering session[2] -- **$3.00**

Mean number of documents ordered per session --**3.26**

Telecommunication

Mean telecommuncation costs per session -- **$1.13**

Mean telecommuncation costs per title ordered -- **$0.35**

[2]Number of documents ordered does not affect the order charge at the Regular Service level.

Labor

Cost of labor to place orders (8 minutes per session @ $8.90/hr.) --**$1.19**

Cost of labor to place orders per title ordered -- **$0.37**

Cost of labor to contact patron (5 minutes @ $6/hr) -- **$0.50**

Cost of labor to contact patron per title (@ 1.83 titles ordered per patron) -- **$0.27**

Annual and Unit Costs of NTIS Document Delivery

Annual Costs (at a estimated current rate of use @ 290 documents per year)[3]

Price of documents	$1885.00
Order charges	$266.80
Telecommunication	$101.50
Cost of labor to order documents	$104.40
Cost of labor to contact patrons (1.83 titles per patron)	$78.30
Mailing envelopes	$14.81
Total Annual Cost of NTIS Document Delivery	**$2450.81**

Unit Costs (per title)

Price of document	$6.50
Order charge	$0.92
Telecommunication	$0.35
Cost of labor to order document	$0.37
Cost of labor to contact patron (1.83 titles per patron)	$0.27
Mailing envelope	$0.04
Total Cost per Title	**$8.45**

[3] Annual costs based on rates of use experienced during the 26-week test period. This period is designated to represent a 1/2 year period, and includes a proportionate representation of holidays, intersession breaks, and peak busy periods of the semester. To ward against too conservative of an estimation, a 10% increase in the rate of use will be factored into projected annual use figures.

Projected Annual Costs of NTIS Document Delivery

Concern for future users naturally arises when action to cease any type of collection growth is taken. In this case, what will the impact of a no-growth collection (NTIS) be on the demand for document delivery, and will the library be able to support this increasing demand? Demand will undoubted rise, but exactly how much? As in the rest of this study, the appearance and "felt" estimations of costs, trends, and usage is being tested against a review and interpretation of collected data on actual costs and usage. Below is an attempt to gauge future use and costs of NTIS document delivery given that the current test period (no collection growth/on-demand ordering) becomes a permanent service.

Projecting annual expenditures for NTIS Document Delivery assumes four factors:

1) that prices and the dollar remain constant,

2) that the number of titles generally sought by patrons will not change over time,

3) that the patron's subject requirements of the collection remain at the same level of diversity as they are now, and

4) that acquisition of NASA and DOE technical reports are maintained at their current level.

The calculation in these cost models is based primarily upon collection fill rates, both current and projected. The logic being that if the fill rate goes down, the requests for document delivery, and therefore expenditures, will go up. These projections, which cover the next 16 years, use the observations that the average age of a sought document is 6 years, and that 94% of all documents sought are 0-13 years old (see Figure 3). In addition, since fill rates for publications of the SRIM period (1982-86 when the

library received SRIM) have been determined (57.4%), the influence of the SRIM collection-building period on future fill rates can be estimated (see Figure 4).

The fill rate for the pre-SRIM period (see Figure 4), before 1982, has also been determined (10%) and is important here since it provides an accurate model of the fill rate expectations of the post-SRIM period (post-1986).[4] The worst-case projected fill rate for the post-SRIM period is considered to be 10%. The projection of cost per usage over the next 20 years is shown in Figure 6.

There is some unexpected good news in that the library most likely has not fully reaped the benefits of its SRIM purchases yet. This is suggested because of the 6 year average age of documents sought puts the heaviest usage of documents purchased during that period at about 1990. Since the fill rate of the SRIM-period documents is a high 57%, the projected overall fill rate can be expected to increase slightly (from a current 29.4% to a 31.65% in 1990) before beginning its gradual decline to a stabile 10% level sometime around the year 2000. A slight increase in fill rate over the next 3 years, should prompt a slight decrease in requests for document delivery, and therefore, annual program costs (see Figure 5).

The declining fill rate anticipated after 1990 needs to be put into perspective as well. It is not severe, and the annual cost difference it will cause is not either (see Table 1). Consider that the difference between the current fill rate, 29.4%, and the worst-case fill rate, 10%, is only 19 points. Dramatic increases in costs, if they should occur, will much more likely be caused by significant increases in document prices and ordering charges. Document prices are expected, however, to remain stabile into the near future according to NTIS Customer Service.

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[4]That the Engineering Library is receiving the same types and amounts of non-NTIS technical report publications after the SRIM period as before is, if anything, a conservative estimation. It is actually receiving more FHWA reports through GPO depository program, and more reports directly purchases from NASA. Therefore, a 10% post-SRIM fill rate is, in turn, a conservative estimation.

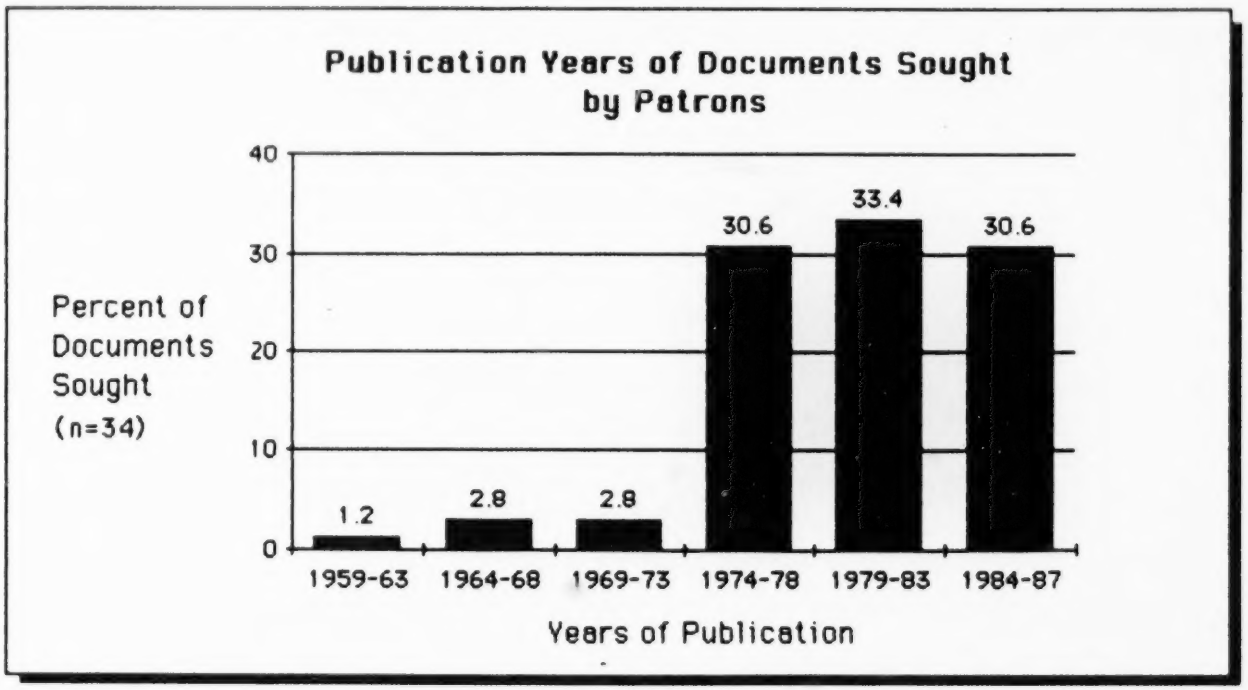

Publication Years of Documents Sought by Patrons
Percent of Documents Sought (n=34)
40
30
20
10
0
1.2
2.8
2.8
30.6
33.4
30.6
1959-63
1964-68
1969-73
1974-78
1979-83
1984-87
Years of Publication

Figure 3.

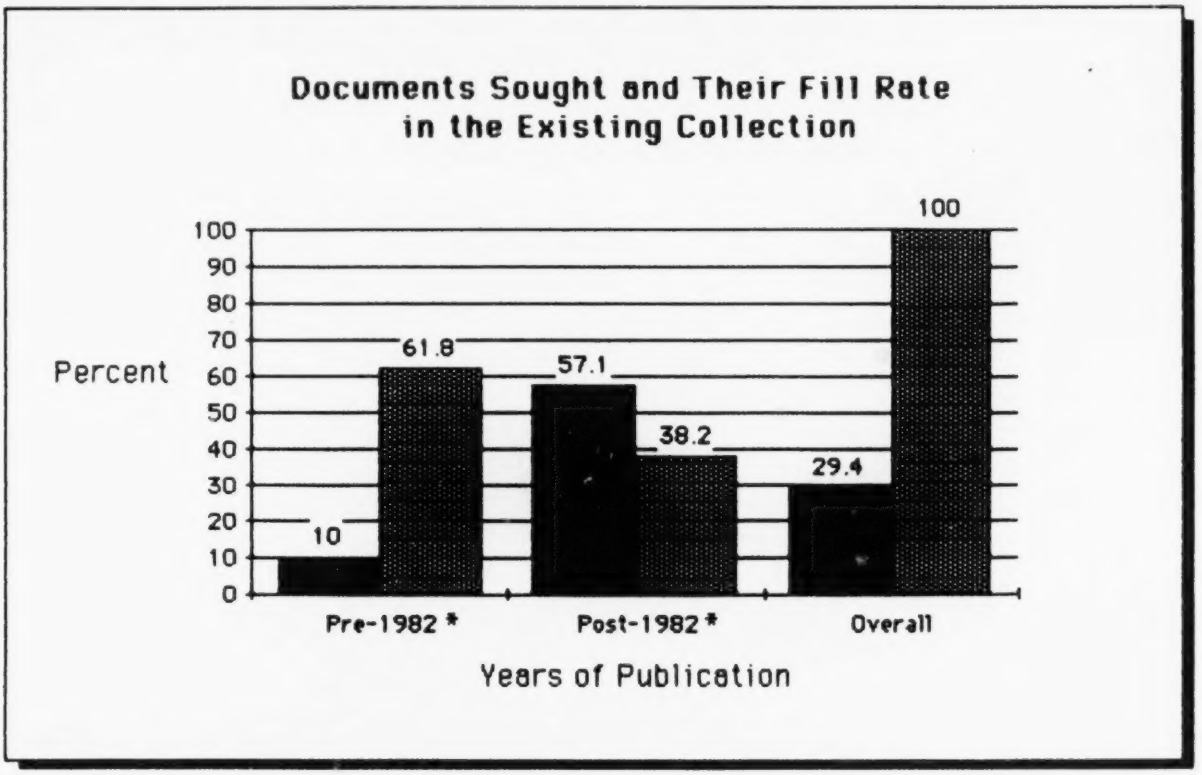
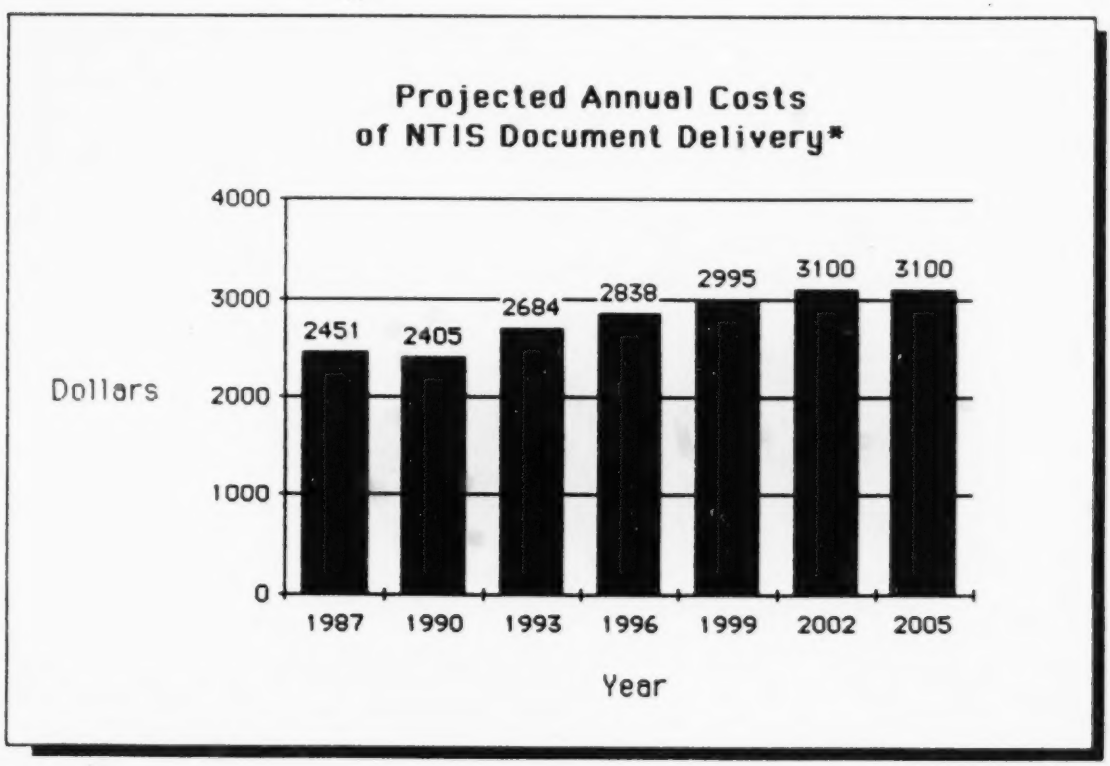
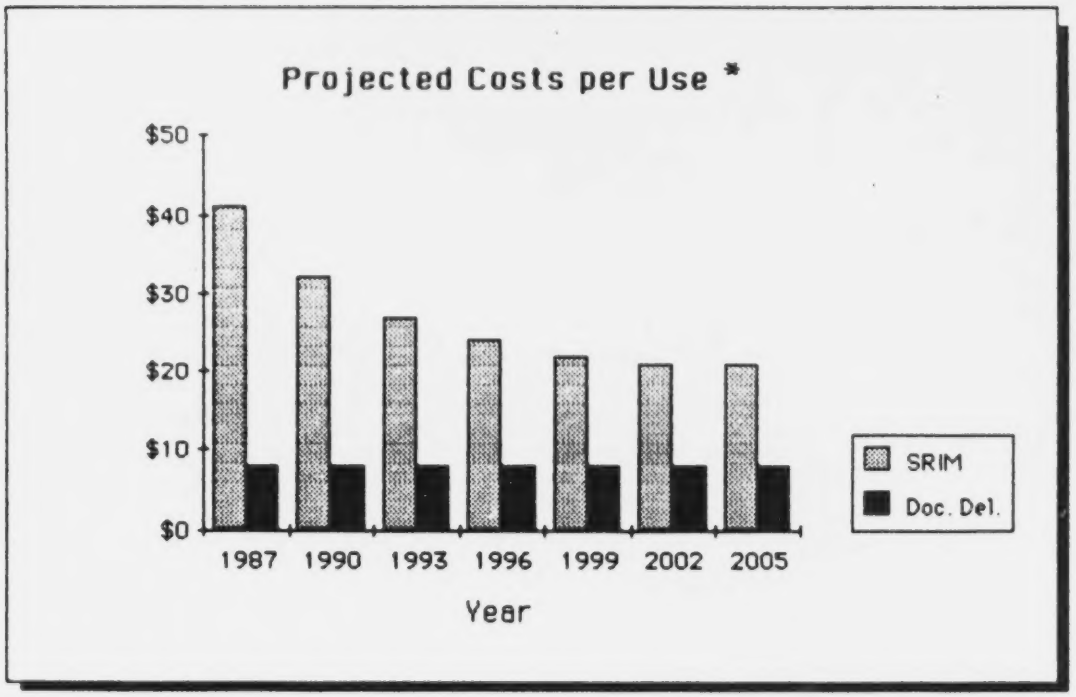

Documents Sought and Their Fill Rate
in the Existing Collection
Percent
100
90
80
70
60
50
40
30
20
10
0
61.8
57.1
38.2
29.4
10
100
Pre-1982 *
Post-1982 *
Overall
Years of Publication
Documents Sought by Patrons
Fill Rate of Documents Sought in
Library Collection
* 1982 marks first year Engineering Library received SRIM
Distributions
n=36

Figure 4.



*assumes dollar, prices, and number of titles generally sought by patrons remain constant.

Figure 5.



*Assumes dollar, prices, and patron demand remain constant.
Assumes both programs would be sustained at levels of the past year (not simultaneously)

Figure 6.

Projected Annual Costs of NTIS Document Delivery

COSTS	1987	1994	2000
Number of Documents Requested	290	332	374
Cost of Document (unit)	$6.50	$6.50	$6.50
Cost of Order Session	$3.00	$3.00	$3.00
Number of Doc. per Order Session	3.26	3.59	3.91
Cost of Order Session per unit	$0.92	$0.84	$0.77
Telecommunication Costs per Session	$1.13	$1.25	$1.35
Telecommunication Costs per Unit	$0.35	$0.35	$0.35
Cost of labor to Order per Session	$1.19	$1.30	$1.45
Cost of labor to Order per Unit	$0.37	$0.36	$0.37
Cost of Labor to Contact Patron	$0.27	$0.27	$0.27
Mailing Envelope	$0.09	$0.09	$0.09
Mailing Env. @ 1.83 Doc. per Patron	$0.05	$0.05	$0.05
Total Unit Cost (@ current prices)	$8.45	$8.37	$8.30
Total Annual Cost (@ current prices)	$2450.81	$2777.80	$3100.72

* Assumes constant prices, dollar and that # of titles generally sought remains constant.

With Projections of :

--1987 @ 29.4% COLLECTION FILL RATE

--1994 @ 20% COLLECTION FILL RATE

--2000 @ 10% COLLECTION FILL RATE (Lowest fill rate estimated)

Table 1.

Evaluation : Measures of Effectiveness

In judging cost-effectiveness of both the SRIM-collection building and the NTIS Document Delivery methods of providing NTIS documents to patrons, the following criteria were considered:

1) Total annual costs

2) Costs per use

3) Unit costs

4) Future costs (total annual, per unit, and per use over the next 20 years).

5) Availability Rate/Fill Rate

6) Turnaround Time (or the number of days it takes to get a document requested from an external source).

7) Standard deviation of turnaround times.[5]

As the following tables indicate, the document delivery method of providing NTIS documents here demonstrates clear superiority in five of the seven measures of effectiveness. The two areas of less than desirable performance, however not poor, are turnaround time and the standard deviation of the turnaround times which demonstrates a higher than anticipated variability. The performance that these two measures convey are externally controlled, and cannot be improved locally. While the mean turnaround time for document delivery (14.39 days) will be a determinant as to whether the document will be useful in the manner it is made available for some patrons, for many it will not. It will continue to be a factor to be reckoned with until

[5]Standard deviation is important for measuring the consistency of turnaround time performance. Poor consistency may manifest problems because patrons often depend on the document arriving within the specified time.

current order fulfillment standards at NTIS are improved. Recommendations have been made to offer a partially user-subsidized RUSH service level for those who wish a guaranteed faster turnaround time.

In conclusion, NTIS document delivery soars high above SRIM collection building as a cost-effective means to provide technical report literature to the patrons of the Engineering Library . The study also points towards the strong and reliable cost-containing potential of document delivery over the next 20 years. Costs per use now and in the future for document delivery prove to be quite reasonable, while costs per use of the SRIM program was discovered as prohibitive. As a final point, this study suggests that a hard look be taken at document delivery as a cost-effective alternative to collection building in similiar situations elsewhere.

NTIS Document Delivery Test Period:

Summary of Performance and Cost Factors

Number of Documents Delivered :	132
Number of Patrons Served :	72
Mean Number of Documents per Patron :	1.83
Number of Different Departments Served :	17
Availability Rate :	97.7%
Mean Turnaround Time (Regular Service) :	14.39 days
Standard Deviation of Turnaround Time :	6.15 days
Cost per Title for Document Delivery (also Cost per Usage) :	$8.45
Projected Annual Cost of Supporting NTIS Document Delivery (@ 290 titles delivered)	$2,450.81
Mean Publication Year of Documents Ordered :	1977.5

NTIS SRIM Collection Building :

Summary of Performance and Cost Factors

Overall Fill Rate :	29.4%
Fill Rate for Documents with Publication Years pre-1982	10%
Fill Rate for Documents with Publication Years 1982-Present	57.1%
Mean Age of Document Sought	6 years
Mean Number of Titles Annually Purchased through SRIM :	9400
Cost per Title for SRIM Distribution :	$1.30
Projected Annual Cost of Supporting NTIS SRIM Distribution (1987):	$12,238.96
Estimated Cost per Use (see below)	$40.53

Estimated Cost per Use

This calculation first estimates the number of technical report titles annually sought by students, faculty and staff. It then determines the total estimated number of titles found (satisfied use) based upon the 29.4% overall fill rate previously determined.

Calculation of the total number of titles sought is based in part upon the estimated annual number of titles to be delivered through the document delivery program (290) and a generous latent usage factor of 60% (ie. the factor compensates for a projected situation where only 40% of the patrons who seek technical report titles participate in the NTIS Document Delivery Service, and so, are the only ones readily accounted for).

Projected number of titles ordered annually through document delivery	290
As represented by the number of titles ordered, the total number of titles annually sought (based on 29.4% fill rate, and the assumption that if found, the title would not be ordered)	411
Estimated total number of titles sought annually given a 60% latent usage factor (ie. where the 411 titles sought - 40% apparent number of titles annually sought)	1028
Estimated number of titles found (satisfied use) @ 29.4% fill rate	302

APPENDICES

APRENDIX A : Additional Data From NTIS Document Delivery Program

APRENDIX B : About NTIS

APRENDIX C : QUIKorder

APRENDIX D : Sample of Resources Used to Measure Cost of SRIM Program

APRENDIX E : Sample of Resources Used to Measure Cost of NTIS Document Delivery Program

APRENDIX F : Univ. of Texas - NTIS Correspondence

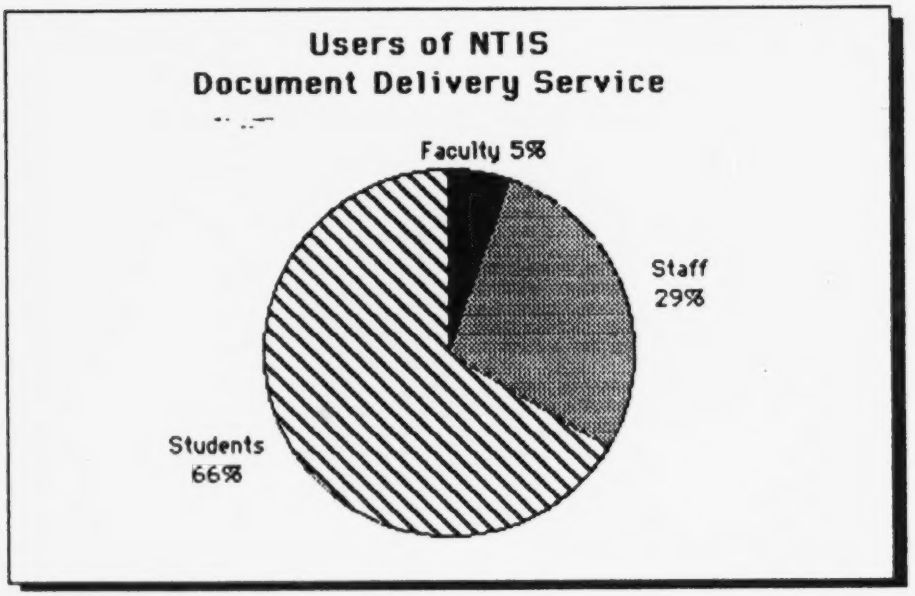
APRENDIX G : Fill Rate Survey Instrument and Sample NTIS Citation

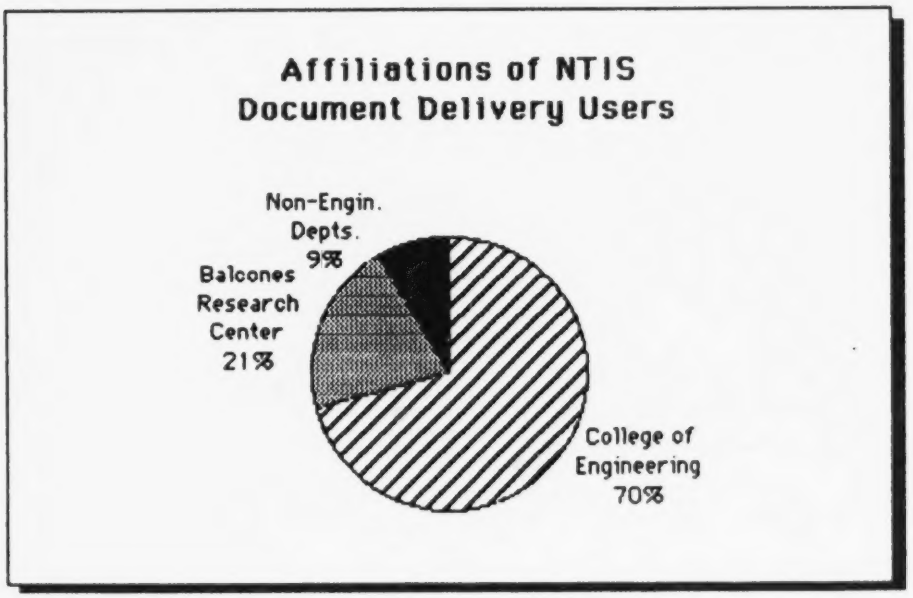
APRENDIX H : Interviews

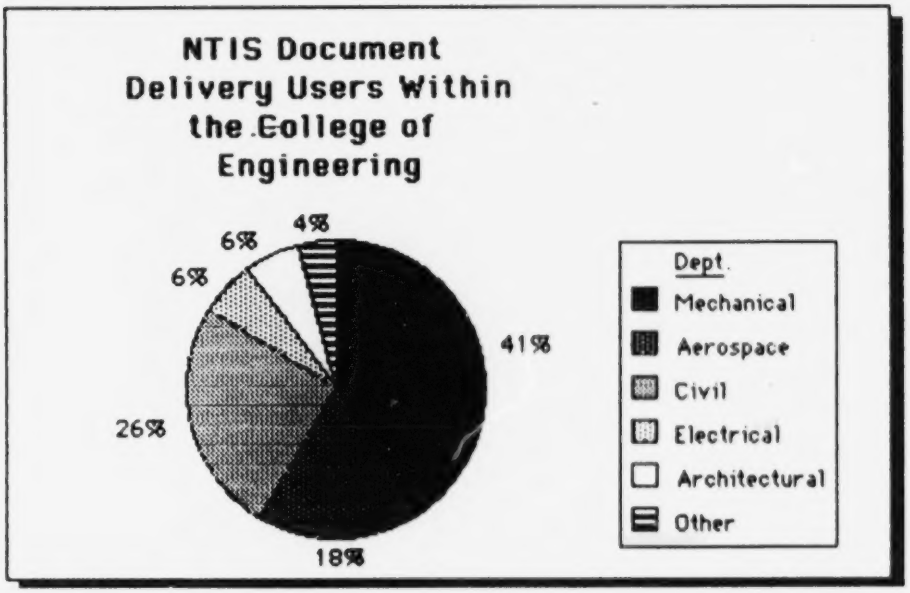
APRENDIX I : Status Report of Study

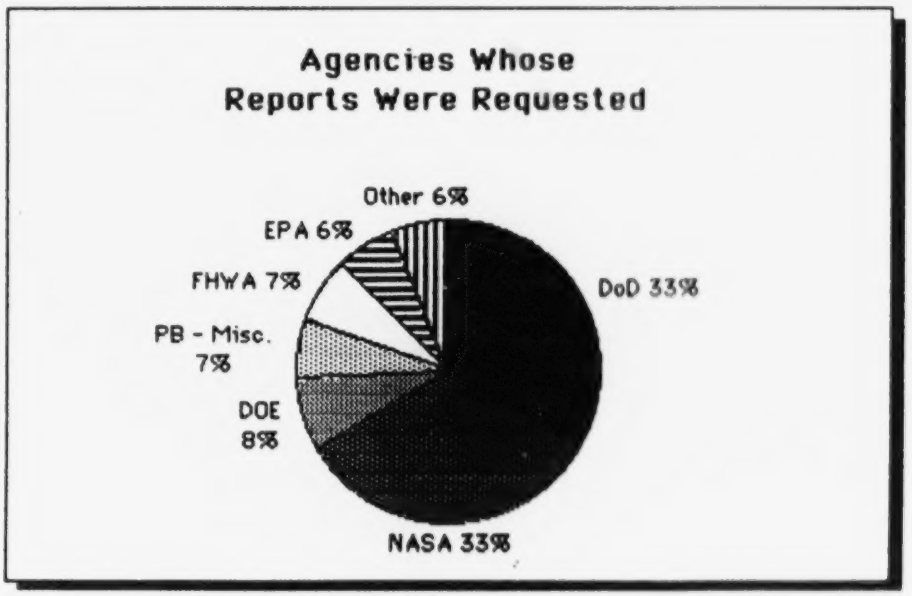
APPENDIX A

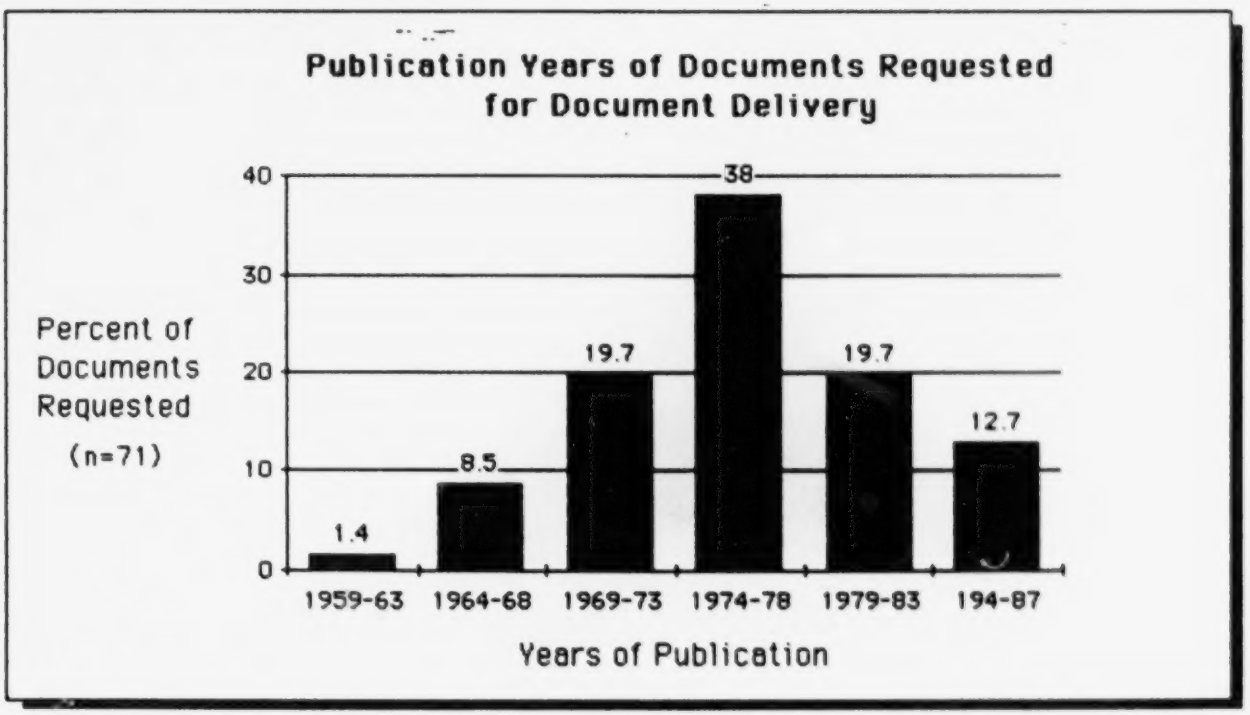
ADDITIONAL DATA FROM NTIS DOCUMENT DELIVERY PROGRAM






NTIS Document
Delivery Users Within
the College of
Engineering
4%
6%
6%
41%
26%
18%
Dept.
Mechanical
Aerospace
Civil
Electrical
Architectural
Other


Agencies Whose
Reports Were Requested
Other 6%
EPA 6%
FHWA 7%
DoD 33%
PB - Misc.
7%
DOE
8%
NASA 33%


Publication Years of Documents Requested for Document Delivery
Percent of Documents Requested (n=71)
40
30
20
10
0
1.4
8.5
19.7
38
19.7
12.7
1959-63
1964-68
1969-73
1974-78
1979-83
194-87
Years of Publication

1/ ABOUT NTIS

The National Technical Information Service (NTIS) is an agency of the U.S. Department of Commerce. Its mission is to collect, organize, announce, and market the results of Government-sponsored research. Two important objectives are: (1) to facilitate use of Government-sponsored research and technology; and, (2) to help increase productivity and innovation in the United States.

Who we are

NTIS is the central source for the public sale of U.S. Government-sponsored research, development, and engineering reports, as well as foreign technical reports and other analyses prepared by contractors or grantees. It is the central source for Federally generated machine processable data files and software programs and manages the Federal Software Exchange Center. In short, NTIS is one of the world's leading processors of specialty information.

Enabling legislation

NTIS sells its technical information products and services under the provisions of Title 15 of the U.S. Code (1151-7). The law established a clearinghouse for scientific, technical, and engineering information and directed NTIS to be self-supporting.

NTIS, therefore, is a unique Government agency sustained only by its customers. The costs of NTIS salaries, marketing, postage, and all other usual operating costs are paid from sales income, not from tax-supported Congressional appropriations; certain developmental programs excepted.

History

For over 40 years, NTIS and its predecessor organizations have served as a focal point for the collection, announcement, and dissemination of unclassified U.S. Government-sponsored research and development reports and translations of foreign technical literature to the scientific, technical, and industrial communities. Its evolution can be summarized as follows:

1. An executive order established the Office of the Publication Board (PB) in 1945 to collect and declassify World War II technical data for dissemination to industry.

2. The U.S. Department of Commerce established the Office of Technical Services (OTS) in 1946 to consolidate the activities of the Board and other organizations.

3. PL 81-776, enacted in 1950, directed the Commerce Department to set up and maintain a national clearinghouse for scientific and technical information to be implemented through the Office of Technical Services (OTS).

4. The Federal Council for Science and Technology recommended expansion of the Department's clearinghouse function in 1964. The Clearinghouse for Federal Scientific and Technical Information (CFSTI) was organized on the foundations of OTS.

5. On September 2, 1970, the National Technical Information Service (NTIS) was established as a primary operating unit of the U.S. Department of Commerce. The order abolished CFSTI and transferred its functions to NTIS with full authority to establish and monitor a clearinghouse of scientific, technical, and engineering information and to assist operating units in the dissemination of business and statistical information. The provisions of Title 15, United States Code 1151-1157, obligates NTIS to recover its costs and be self-supporting through the sale of its products and services.

Staff

NTIS carries out its mission with a relatively small staff - fewer than 400 people. Within the Department of Commerce, the Director of NTIS reports to the Assistant Secretary for Productivity, Technology, and Innovation.

Location

NTIS' main facility is located at 5285 Port Royal Road, Springfield, Virginia. This is near the Beltway (Route I-495) that girds the Nation's Capital. NTIS also has an Information Center and Bookstore in the Herbert C. Hoover Building (occupied by the Department of Commerce) at 14th Street and Independence Avenue, N.W., Washington, D.C.

2/ THE NTIS COLLECTION

The NTIS information collection consists of almost 2 million reports. These generally are available in both paper copy and microfiche.

Sources

Acquisitions come from more than 450 sources -- Federal Government, state, and local governments, foreign governments and a few non-government organizations. Each work day, approximately 300 new titles are received.

Reports input into the NTIS Bibliographic Database during 1985:

25,149	Department of Energy
15,449	Department of Defense
5,154	Others
4,938	NASA
4,059	National Technical Information Service
2,741	Department of Commerce
2,697	Department of Health & Human Services
1,741	Environmental Protection Agency
1,223	Department of the Interior
961	Department of Transportation
909	Department of Agriculture
709	Nuclear Regulatory Commission
639	National Science Foundation
273	Department of Housing & Urban Development
215	General Accounting Office
159	Department of Labor

Special classes of reports announced in the NTIS Database in 1985:

16,440	Foreign reports and translations
3,820	Reprints from journal articles
1,986	Magnetic Tapes
1,306	Government-owned Inventions

For a list of sources represented in the entire collection, see the Corporate Author Authority List - 1983 (PB83-156034).

Subject coverage

The NTIS collection contains authoritative and timely information on almost every conceivable subject. This information is used continually as a reference resource for decision makers, policy makers, and problem solvers. In 1985, the subject input was as follows:

2,802	Administration and Management
1,259	Aeronautics and Aerodynamics
1,727	Agriculture and Food

669	Astronomy and Astrophysics
1,361	Atmospheric Sciences
2,643	Behavior and Society
731	Biomedical Technology and Human Factors Engineering
1,136	Building Industry Technology
1,611	Business and Economics
6,616	Chemistry
1,946	Civil Engineering
1,033	Combustion, Engines, and Propellants 847 Communication
847	Communication
1,875	Computers, Control, and Information Theory
470	Detection and Countermeasures
1,441	Electrotechnology
7,436	Energy
6,270	Environmental Pollution and Control
784	Government Inventions for Licensing
1,231	Health Planning and Health Services Research
2,638	Industrial and Mechanical Engineering
2,650	Library and Information Sciences
2,262	Manufacturing Technology
3,210	Materials Sciences
1,291	Mathematical Sciences
5,097	Medicine and Biology
2,161	Military Sciences
125	Missile Technology
87	NASA Earth Resources Survey Program
3,538	Natural Resources and Earth Sciences
121	Navigation, Guidance, and Control
6,450	Nuclear Science and Technology
1,344	Ocean Technology and Engineering
572	Ordnance
165	Photography and Recording Devices
7,550	Physics
1,133	Problem Solving Information for State and Local Governments
789	Space Technology
1,448	Transportation
1,360	Urban and Regional Technology and Development

For greater detail, see the COSATI Subject Category List (AD-612 200) and the NTIS Subject Classification (PB-270575), as well as the major thesauri described under "NTIS Bibliographic Database."

Document types

Information in the NTIS collection is in many document types. In addition to technical reports, the collection includes other formats, such as periodicals, reprints, patent applications, bibliographies, Tech Notes, data files (on magnetic tape and diskettes), and software programs.

Reports are the core of the NTIS information system. The collection contains almost 2 million technical reports on completed Government research. All are permanently available on film, paper, or in some cases, machine-readable form.

Periodicals. NTIS acts as the public sales and distribution agency for more than 80 periodicals issued by other Federal agencies and some not-for-profit organizations. Additionally, NTIS produces 27 subject-specific weekly Abstract Newsletters and a bi-weekly journal, Government Reports Announcements & Index, the paper counterpart of the NTIS Bibliographic Database.

Reprints. NTIS announces some 4,000 journal reprints yearly. Most come from the Department of Defense, National Oceanic and Atmospheric Administration, the National Bureau of Standards, and the Bureau of Health Planning and Resources Development. Some of these are available from NTIS.

Inventions. NTIS is the central source for information on all new U.S. Government-owned patents and patent-pending applications. When patent applications are filed and when patents are issued, these are listed in the NTIS Bibliographic Database. Copies of the patent applications are available from NTIS. NTIS promotes and licenses Government inventions with good commercial potential.

Bibliographies. Approximately 3,000 different titles represent computer searches performed on 20 databases, both Government-sponsored and privately produced, foreign and U.S. owned. These are available as Published Searches.

Tech Notes. These are one- or two-page fact sheets that highlight newly-developed technology having potential for commercial or practical use. They summarize new processes, inventions, equipment, and techniques. For additional information ask for free brochure PR-365, Tech Notes.

Data files. NTIS also is a central source of Government-developed computer data files -- both bibliographic and non-bibliographic -- on magnetic tape. (Selected files are available on 5¼" diskettes.)

The bibliographic files include the NTIS Bibliographic Database; the Energy Database (EDB) produced by the U.S. Department of Energy; the Selected Water Resources Abstracts (SWRA) produced by the Office of Water Research and Technology, U.S. Department of the Interior; AGRICOLA produced by the National Agricultural Library; NIOSHTIC produced by the National Institute for Occupational Safety and Health; and Federal Research in Progress (FEDRIP), a composite of research project summaries from 10 Federal agencies.

Nonbibliographic data pertinent to business and scientific interests include some 1,000 statistical, numeric, and textual source data files from more than 50 Federal agencies. These files include health and vital statistics from the National

Center for Health Statistics, nutrition and food consumption data from the U.S. Department of Agriculture, and regulatory licensee data files from the Federal Communications Commission. These are listed in A Directory of Computerized Data Files (PB85-155174).

Software. The NTIS Software Center has a collection of some 1,300 computer programs on magnetic tape, from more than 100 Federal agencies covering an array of subject fields such as energy, environmental pollution and control, engineering, computer sciences, business and economics, software tools, mathematics and statistics, and cartography. These are listed in A Directory of Computer Software (PB86-135357). For more information ask for the free brochures PR-260, NTIS Computer Software; PR-261, Directory of Computer Software; and PR-383, Federal Software Exchange Catalog.

Tech Notes. Descriptions of equipment, inventions, and processes developed by the Government in Federal laboratories and ready or about ready for practical application in the private sector are announced in Tech Notes. These one- or two-page announcements are available in 10 scientific and technical subject areas. For more information ask for PR-365, Tech Notes.

Government Inventions for Licensing, the weekly Abstract Newsletter described on page seven, is a practical companion to the five-volume Patents Catalog. This newsletter describes all U.S. Government-owned patents and patent applications currently being filed or issued. In addition, the first issue of each month contains a listing of foreign government owned inventions available for licensing by U.S. businesses. More than 40 percent of the abstracts contain illustrations.

SRIM. Customers may subscribe to a standing order microfiche service: Selected Research in Microfiche (SRIM). This service enables the user to automatically receive the full texts of only those documents relating to their individual interests. SRIM is available in 41 major subject categories and 382 subcategories listed in the free brochure PR-270. Customers can order all the microfiche reports in any category, or subcategory, or by issuing agency. This low-cost, automatic distribution service is cheaper than paying for individual microfiche reports ordered. An optional SRIM Index may be ordered with a SRIM subscription. The SRIM Index is available in both microfiche and paper copy. It is customized for each SRIM subscriber and is produced quarterly. It cumulates each quarter in the calendar year with new reports received during the most recent quarter being asterisked in the left margin of the Subject index. The index displays bibliographic information according to six sorting techniques: subject, personal author, corporate author, contract grant number, accession/report number, and title. The fourth quarter issue is to be retained as an annual index.

Retrospective products

A hard bound Government Reports Annual Index cumulates (without abstracts) the information contained in the 26 indexes of the GRA&I journal issues. The Annual Index has six volumes: Keywords (2 volumes), Personal Author, Corporate Author, Contract/Grant Numbers, and NTIS Order/Report Number. The annual cumulations are available from 1968 through 1984. The current cumulation is published the following Spring. For more information send for PR-273, the brochure describing Government Reports Annual Index.

5/ ORDERING FROM NTIS

NTIS supplies its customers with more than 6 million documents and microforms annually, shipping more than 23,000 information products daily.

Order Numbers. The number needed to order a document from NTIS is the accession number. Example: PB86-345210. If you do not have the accession number but do have other information, such as title, NTIS will help identify the document and supply the order number. Write or call the Identification & Inventory Branch, (703) 487-4780. Up to three titles will be identified by telephone while you wait. A person will be available to answer inquiries from 9:00 to 11:00 a.m. in the morning and 1:00 to 3:00 p.m. in the afternoon, Eastern Standard Time.

Reception room. At the NTIS operations center in Springfield, VA, a reception room is provided for customer convenience. Customers may use the Government Reports Announcements & Index (GRA&I) journal, the Title Index on microfiche, and other reference tools to help identify titles and ordering information, such as availability, order number, format, and price. Documents ordered in advance may be picked up at the reception room.

Information center and bookstore. For the further convenience of customers, the NTIS Information Center and Bookstore located in the Great Hall of the Commerce building (Hoover Building) in downtown Washington, DC, has the same reference tools available for use. A selection of current titles in paper copy shelf stock is displayed for browsing and sale. Documents ordered in advance may be picked up at the Information Center and Bookstore.

Regular service

Regular service orders, telephone or mail, are processed in rotation, as they come to NTIS. Delivery to domestic customers is by first class mail or equivalent. Regular service orders also may be picked up at the reception room in Springfield or at the Information Center and Bookstore in downtown Washington.

Cost: $3 handling fee per order for customers eligible to pay domestic prices, $4 per order subject to the Foreign Price Schedule.

Turnaround: From customer to NTIS, 3 to 8 days; from NTIS to customer, 2 to 14 days.

Rush handling service

Rush handling also is for customers who need fast service. This ordering method guarantees that a particular order will be processed through NTIS within 24 hours of receipt. Rush handling orders receive immediate validation, verification of availability, and individual hand-processing through the warehouse or through

priority printing if production from film is required. The items ordered are delivered by first class mail or equivalent. They also may be picked up at the Springfield Operations Center, 5285 Port Royal Road, Springfield, Virginia; or at the Information Center and Bookstore, 14th and Constitution Avenue, N.W., Washington, D.C.

Rush handling orders for mailing rather than pickup are accepted only from customers having NTIS Deposit Accounts or American Express, VISA, or MasterCard Accounts. Customers must use order numbers (accession numbers).

Cost: Rush handling delivery adds $10 to the cost of each item or copy ordered. If a Rush handling order is picked up in Springfield or downtown Washington, the fee is $7.50 rather than $10.

Turnaround: From NTIS to customer, 1 to 3 days

Express Service

Express service is for customers who need very fast service. Guidelines are the same as for Rush handling service. Delivery is by overnight courier.

Cost: Express service adds $20 to the cost of each item or copy ordered.

Turnaround: From NTIS to customer, 1 to 2 days

TELEX orders

Customers may charge TELEX orders to an NTIS Deposit Account or an American Express, VISA, or MasterCard. The NTIS TELEX number is 89-9405 (domestic) or 64617 (international). Orders for foreign destinations are subject to the foreign prices.

Cost: There is no additional cost for this service, other than the handling charge per order.

Turnaround: TELEX orders are given regular service unless otherwise specified by the customer.

Telefacsimile orders

Orders may be sent to NTIS via Telecopier, Panafax MV3000. For more information call NTIS at (703) 321-8547.

Cost: There is no additional cost for this service, other than the handling charge per order.

Turnaround: Telefacsimile orders are given regular service unless otherwise specified by the customer.

APPENDIX C

National Technical Information Service

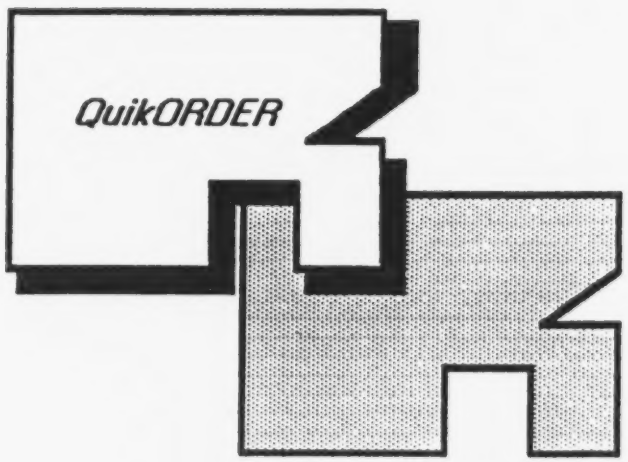
NTIS/ QuikORDER

USERS' MANUAL

Office of Computer and Communications Services

CHRIS HARTUNG

703-487-4788



OCTOBER 1986

INTRODUCTION

QuikORDER is an electronic ordering system designed to facilitate NTIS Deposit Account users in ordering documents from NTIS. This service is available from 7:00 a.m. Mondays through 4:00 p.m. Saturdays, with the exception of necessary emergency repairs, and the following predetermined times: (1) every Thursday from 4:00 a.m. to 6:00 a.m.; (2) all Federal holidays. Please note that all times given here are Eastern Pacific Time.

The computer system used by NTIS QuikORDER is an IBM 3330 mainframe operating under an OS/MVT environment and is accessed via a telecommunication interface known as COMTEN. QuikORDER is comprised of of various screen displays through which documents may be ordered, verified and prepared for fulfillment.

This manual is an instructional manual designed to provide users with comprehensive information on each screen display and its usage. Several appendices have been added containing information such as: telephone numbers for key NTIS departments, a list of compatible terminals which may be used to access the QuikORDER system, and a complete list of error messages and prompts which may appear during and "ordering session."

It is advisable to read this document in its entirety prior to logging on to the computer system and QuikORDER.

NTIS/QuikORDER

I SIGNING ONTO THE COMPUTER SYSTEM

In order for you to communicate successfully with the NTIS computer system it is necessary to have an asynchronous terminal with a full screen display. You will also need a modem (external or internal), set with a bit serial interface of seven (7) information bits and one (1) parity bit (even). 7, 1, EVEN

The following steps outline the procedures for signing onto the "host computer" located at the Departmental Computer Center, Office of the Secretary, Department of Commerce, Springfield.

STEP 1: Dial (703) 487-4500.

STEP 2: Upon making a connection to the "host computer," enter a carriage return (CR).

RESPONSE SYSTEM OR MENU

STEP 3: Enter "FSALL" and CR.

RESPONSE ENTER LOGON

STEP 4: At this point you have ten (10) seconds to enter your terminal identification code. Using the list of terminals and their associated codes (Figure I-1), select the code that is associated with your terminal type or the type of terminal you are emulating. This code must be entered as given and held down until the "host computer" responds. '5'

RESPONSE *** MDS 8070 - VER 03.08 ***

STEP 5: Enter two (2) CR. The "host computer" will respond by clearing the screen and positioning the cursor at the top left corner of the screen and the following message will appear on the last line of the screen display:

RESPONSE X SYSTEM FULL SCR 00/06 SYS RDY

STEP 6: Enter CR. This will cause the screen to be cleared.

RESPONSE NETWORK: (MAF) TERMINAL MUST SIGNON

STEP 7: Enter "/FSDBDCA" and a CR. This will cause the screen to be cleared.

RESPONSE LOGON/_____

✱ STEP 8: Enter "QUIK" and a CR.

RESPONSE This will cause the screen to be cleared and the QuikORDER Logon Screen to be displayed. Proceed to Section II for instructions on logging onto the QuikORDER System.

NOTE: Please note that throughout your "ordering" session, when a CR is entered the message given in Step 5 will be updated and "flashed" across the last line of your terminal screen. This is normal and there is no need for concern.

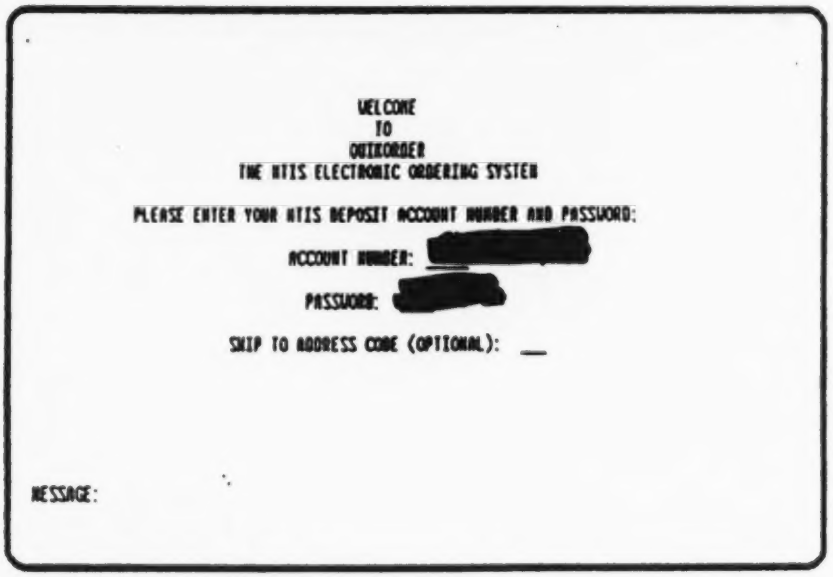
NOTE: Please note that failure to logon after three unsuccessful attempts will cause the "host computer" to disconnect the phone line.

EMULATE VT100
DEC VT 52
TELEVIDEO
KERMIT - VT 52

II SIGNING ONTO THE QuikORDER SYSTEM

To use the QuikORDER system, you must first have an established Deposit Account with NTIS. If you do not have an account with us, please call Mrs. Dawn Riddle at the NTIS General Accounting Division, Deposit Accounts Branch, (703)487-4770.

The QuikORDER Logon screen displays as follows:



STEP 1: Enter your Deposit Account Number
Enter your QuikORDER Password
Enter the ship-to address code which is associated with the address to which your documents will be sent (optional)
Enter a CR.

RESPONSE The QuikORDER system will verify your deposit account number, your QuikORDER password and the ship-to address code you have entered (if any). If there is an error, a message will be displayed on the last line of the screen display, in which case correct the misinformation and CR.

NOTE: Failure to enter a correct password/deposit account number after three attempts will result in QuikORDER returning control to the "host computer."

If no errors have occurred or any errors were corrected successfully, the QuikORDER Selection Menu will appear. Proceed to Section III for instructions on the use of this menu.

III - QuikORDER SELECTION MENU

The QuikORDER Menu allows you to choose to:

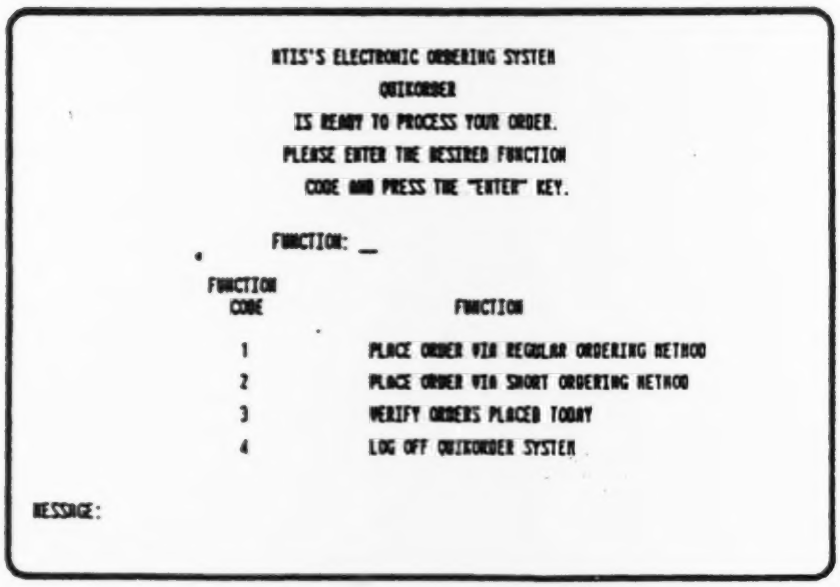
1) Place you order via the regular ordering method. This method offers instructional prompts and data verification. It is designed for use by persons who have never used QuikORDER before and are not familiar with the screen displays and how to use them. The messages and prompts which appear on this screen are numerous and basically self-explanatory. This screen will accept one document per screen display.

2) Place your order via the short ordering method. This screen is designed to be used by persons who are familiar with QuikORDER and the NTIS inventory. The messages and prompts are fewer, up to three documents may be entered per screen display, and the document titles are not displayed.

3) Verify orders placed today. This screen will display all of the orders you have placed today, via the QuikORDER system.

4) Log off of the QuikORDER system. This will log you off of the QuikORDER system and return control to the "host computer."

The QuikORDER Order Menu displays as follows:


NTIS'S ELECTRONIC ORDERING SYSTEM
QUIKORDER
IS READY TO PROCESS YOUR ORDER.
PLEASE ENTER THE DESIRED FUNCTION
CODE AND PRESS THE "ENTER" KEY.
FUNCTION: _
FUNCTION CODE
FUNCTION
1 PLACE ORDER VIA REGULAR ORDERING METHOD
2 PLACE ORDER VIA SHORT ORDERING METHOD
3 VERIFY ORDERS PLACED TODAY
4 LOG OFF QUIKORDER SYSTEM
MESSAGE:

STEP 1: Enter the desired function code and a CR.

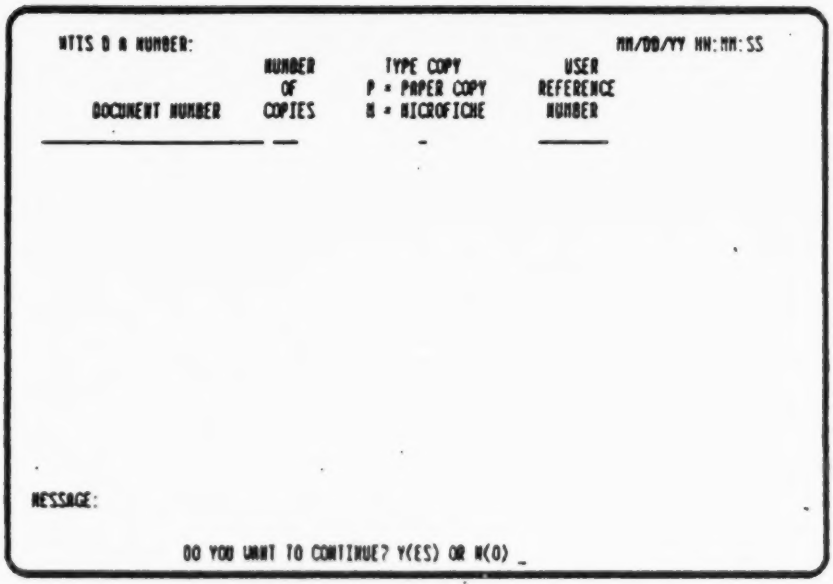
RESPONSE QuikORDER will respond by displaying the screen for the desired function or display an error message at the bottom of the screen.

If an error has occurred, it must be corrected prior to continuing.

IV REGULAR ORDERING

The regular ordering process allows you to enter one document at a time. During an ordering session, many prompts and verification procedures will be given so that ordering is made as simple as possible.

The Regular Ordering screen displays as follows:


NTIS D A NUMBER:
MM/DD/YY HH:MM:SS
NUMBER OF COPIES
TYPE COPY P = PAPER COPY M = MICROFICHE
USER REFERENCE NUMBER
DOCUMENT NUMBER
MESSAGE:
DO YOU WANT TO CONTINUE? Y(ES) OR N(O)

STEP 1: To return to the QuikORDER Order Menu:
Press the TAB key until the cursor is placed at the question "DO YOU WANT TO CONTINUE ? (Y)ES OR (N)O _".
Enter an "N" and a CR.

RESPONSE QuikORDER will respond by returning you to the QuikORDER Selection Menu.

STEP 2: To place a document order:
Enter the document number* and TAB
Enter the number of copies and TAB
Enter the type of copy (no TAB required)
Enter any routing information which you would like to have appear on the address label (optional).
Verify all information keyed and enter a CR.

RESPONSE QuikORDER will respond by verifying the document number, number of copies, and the form type. If any problems have occurred, e.g., the document number is incorrect, the number of copies you are requesting is not available, etc.; a message explaining the problem will be displayed at the bottom of the screen.

*NOTE: Due to the format of the NTIS Master Inventory File, all document numbers are placed on this file in a abbreviated form, which contain no special characters such as commas (,), blanks ( ) or slashes (/), although document numbers are formatted in several different ways, (i.e., the announcement publication may print the number in one format, while NTIS stores it in a different format. The QuikORDER system has been designed to accept the document number you select in one of two formats:

1) with special characters (e.g., contains blanks, commas, slashes, etc.)

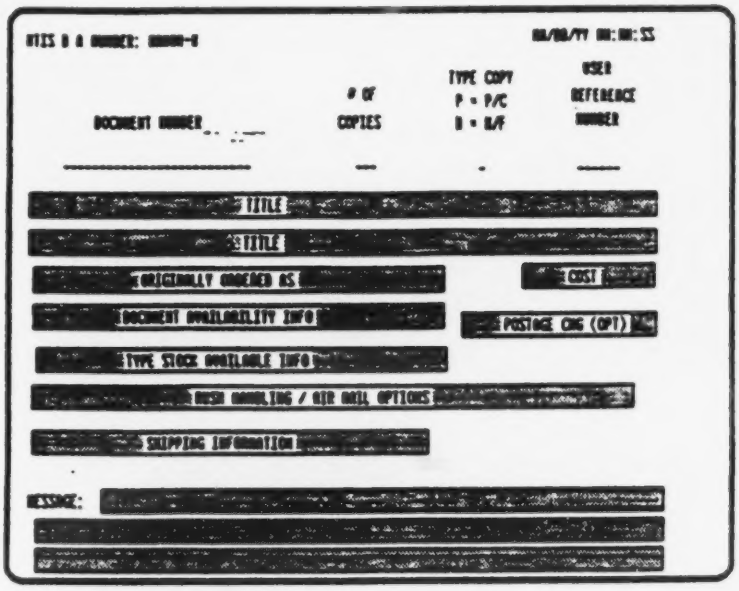
EXAMPLE: ADA-8612767/2

2) without special characters.

EXAMPLE: ADA86127672

In example number one, QuikORDER will edit the number for you and display the results. This will be the document number which will be used to fill your order.

The Regular ordering screen and the returned data areas are as follows:



The informational areas which are returned (shaded areas) are described as follows:

TITLE - This area will contain the title of the document you are ordering. If the document you have selected was announced (first available for sale) more than six years ago, the title will not be available for display.

ORIGINALLY ORDERED AS - This area will contain the original document number you entered. The document number which appears on the line above is the document number which your order will be filled with. The reason for this action is that the document number you are ordering may have been superseded by a newer release (in which case the cross reference number will be displayed), or the original document number may have been edited to remove special characters. Please make a note of the new document number for future reference.

DOCUMENT AVAILABILITY INFO - This area will contain information pertaining to the availability of the document number you are requesting. Many of the documents in the NTIS collection are restricted for sales and distribution to certain customer types, e.g., available to U.S. governmental departments and agencies only, not available to foreign addressees, etc.

TYPE STOCK AVAILABLE INFO - This area will contain information pertaining to the stock availability. If you are requesting paper copy form, and the number of copies you request is available, the message which will be displayed in this area would be "PAPER COPY SHELF STOCK." If the number of copies you are requesting is not available, the message displayed would be "MUST BE REPRODUCED."

RUSH HANDLING/AIR MAIL OPTIONS - This area will contain a question giving you the option of choosing NTIS's Rush Order Handling option. You must respond to this question before processing can continue.

After you have responded to the Rush Order option, the Air Mail option is given. This option is given only to foreign users and must be answered prior to continuing.

COST - This area will contain the total cost for this document. The total cost will reflect the cost per document multiplied by the number of copies you are requesting, minus any discounts which may apply.

POSTAGE CHARGE (OPT) - This area will contain the total postage amount for this document. It will reflect the cost per document multiplied by the number of copies you are requesting.

MESSAGE - This area will contain any error messages or prompts which may appear during and ordering session.

STEP 3: Correct any errors which may have occurred and CR.

RESPONSE QuikORDER will respond by displaying a message asking if you wish to order this document. You must answer this question prior to continuing.

STEP 4: To place order:
Enter a "Y" and CR.

RESPONSE QuikORDER will accept your order and redisplay the order screen, with the following message:

YOUR ORDER HAS BEEN ACCEPTED

STEP 5: To cancel your order.
Enter an "N" and CR.

RESPONSE QuikORDER will respond by clearing the screen and redisplaying a blank order screen.

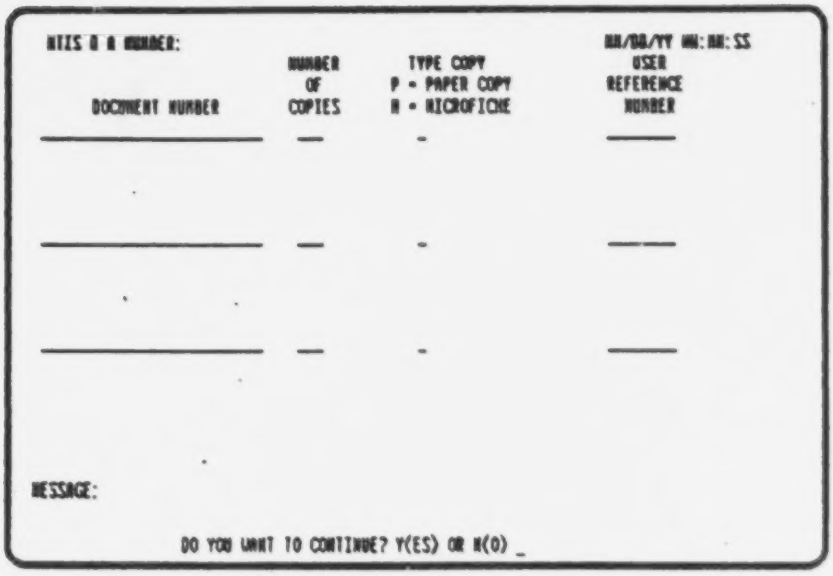
STEP 6: If you chose to order the document, you must at this time choose to continue or not. Press the TAB key until the cursor is positioned at the question "DO YOU WANT TO CONTINUE _? (Y)ES OR (N)O."

RESPONSE If you elect to continue, QuikORDER will redisplay a blank order screen and is now ready for another document number.

If you elect not to continue, QuikORDER will return you to the QuikORDER Selection Menu.

V SHORT ORDERING

The Short Ordering process allows you to order up to three documents per screen display. The Short Order screen displays as follows:


NTIS D A NUMBER:
DOCUMENT NUMBER
NUMBER OF COPIES
TYPE COPY P = PAPER COPY M = MICROFICHE
MM/DD/YY HH:MM:SS USER REFERENCE NUMBER
MESSAGE:
DO YOU WANT TO CONTINUE? Y(ES) OR N(O) _

STEP 1: To return to the QuikORDER Order Menu:
Press the TAB key until the cursor appears after the question "DO YOU WISH TO CONTINUE _ ? (Y)ES OR (N)O."
Enter an N and a CR.

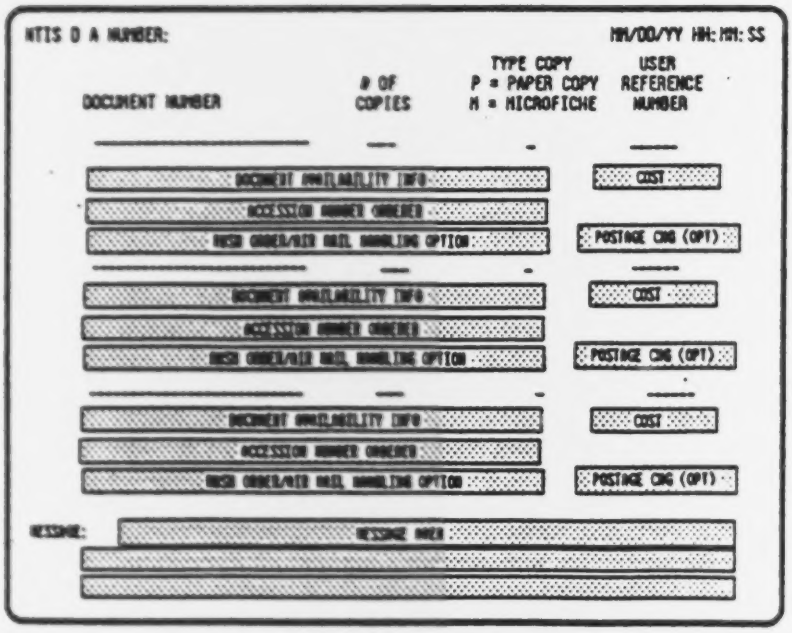
RESPONSE QuikORDER will respond by clearing the screen and redisplaying the QuikORDER Selection Menu.

STEP 2: To order documents:
Enter the document number and TAB
Enter the number of copies and TAB
Enter the type of copy (no TAB required)
Enter any routing information which you would like to have appear on the address label (optional).

Repeat the step above as many as three (3) times. Verify all data entered and a CR

RESPONSE QuikORDER will respond by verifying each document number, number of copies and type copy fields you have completed. If any errors have occurred, QuikORDER will display the appropriate message under the document number in error. Almost all of the messages which will appear in this area are in abbreviated form. Appendix C contains a complete list of all error messages and their explanations.

Given below is an example of a returned order screen and the informational areas:



The informational areas which are returned (shaded areas) are as follows:

DOCUMENT AVAILABILITY INFO - This area will contain messages pertaining to the availability of the document number directly above it. Reference Appendix C for explanation of any message which may appear here.

If you have chosen a document which is unavailable you may, at this time, enter another document number.

ACCESSION NUMBER ORDERED - This area will contain the original document number you entered. The document number which appears on the line above is the document number with which you order will be filled. The reason for this action is that the document number you are ordering may have been superseded by a newer release (in which case the cross reference

number will be displayed), or the original document number you entered has been edited to remove spaces and special characters. Please make a note of the new document number for future reference.

RUSH ORDER/AIR MAIL OPTIONS - This area will contain options pertaining to NTIS's Rush Order handling and Air Mail Postage. These options will not be presented if the document is not available and you have selected no other document numbers.

COST* - This area will contain the total cost for this document. It will reflect the cost per copy multiplied by the number of copies you are ordering plus any charges for Rush Order Handling and minus any applicable discounts.

POSTAGE* - This area will contain the total amount of postage which will be charged for this document. It will reflect the cost per document multiplied by the number of copies you are ordering.

NOTE: The Air Mail option is offered to foreign addressees only. All domestic addressees receive First Class postage, unless otherwise specified.

All of the areas described above will be displayed, where applicable, for each document number you have entered.

*NOTE: The total cost for both documents and postage will be summed and presented when you have completed your ordering session and are ready to logoff of the QuikORDER system.

STEP 3: Correct any errors which may have occurred and CR.

RESPONSE QuikORDER will respond by redisplaying the order screen with the Rush Order option display. This question must be answered prior to continuing.

STEP 4: Enter either "N" or "Y" after each of the Rush Order Option questions given and CR.

RESPONSE QuikORDER will respond by redisplaying the order screen.

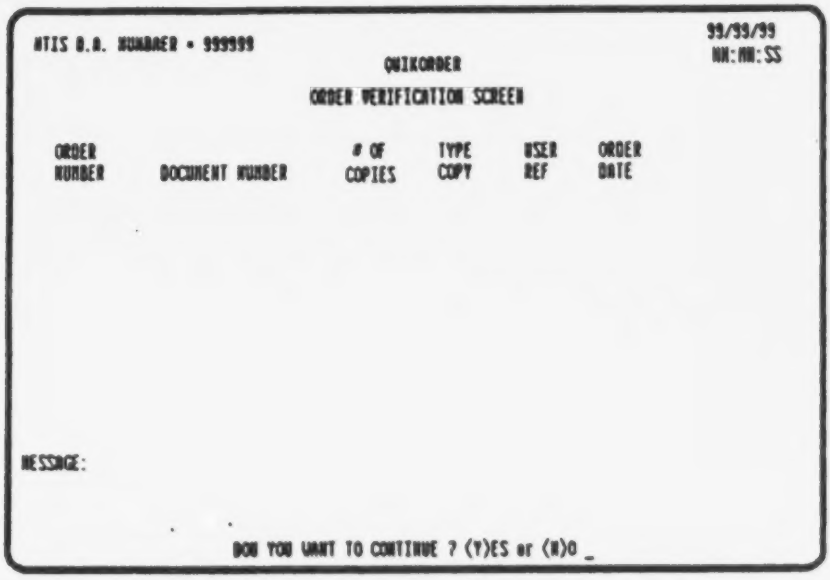
STEP 5: If all errors have been corrected, enter a CR. Otherwise, go to STEP 3.

RESPONSE QuikORDER will clear the screen display, flash an "ORDER ACCEPTED" message at the bottom of the screen and redisplay a blank ordering screen.

STEP 6: Your documents have been accepted and QuikORDER is now ready to accept more document numbers. If you wish to discontinue, go to STEP 1, otherwise go to STEP 2.

VI VERIFY ORDERS PLACED TODAY

The Order Verification screen will display all orders you have placed today. It will display up to six (6) document orders per screen display. The Order Verification screen displays as follows:



STEP 1: To return to the QuikORDER Selection Menu:
Press the TAB key until the cursor is positioned after the question "DO YOU WANT TO CONTINUE ? _ (Y)ES OR (N)O." Enter an "N" and CR.

RESPONSE QuikORDER will respond by returning you to the QuikORDER Selection Menu.

STEP 2: To review orders placed:
Press the TAB key until the cursor is positioned after the question "DO YOU WANT TO CONTINUE ? _ (Y)ES OR (N)O." Enter a "Y" and CR.

RESPONSE QuikORDER will respond by displaying up to six (6) document orders. If there are more orders to be displayed, the following message will appear in the message area:

MORE INFORMATION. TO CONTINUE VIEWING, ENTER A CR.

STEP 3: To continue:
Enter a CR.

RESPONSE QuikORDER will respond by displaying the next set of orders.

Step three may be repeated until all information has been displayed. QuikORDER will not redisplay any order unless you return to the QuikORDER Selection Menu and reselect option number 3.

STEP 4: When all of your orders have been displayed, the following message will be displayed in the message area:

ALL OF YOUR ORDERS HAVE BEEN DISPLAYED. PLEASE ENTER A CR TO REVIEW TOTALS.

If you wish to view the total for the document orders displayed, enter a CR.

RESPONSE QuikORDER will respond by clearing the screen and displaying total dollar amount for the documents reviewed as well as the total number of document orders placed.

STEP 5: After reviewing the dollar totals, enter a CR.

RESPONSE QuikORDER will respond by returning you to the QuikORDER Selection Menu.

VII LOGGING OFF OF THE QuikORDER SYSTEM

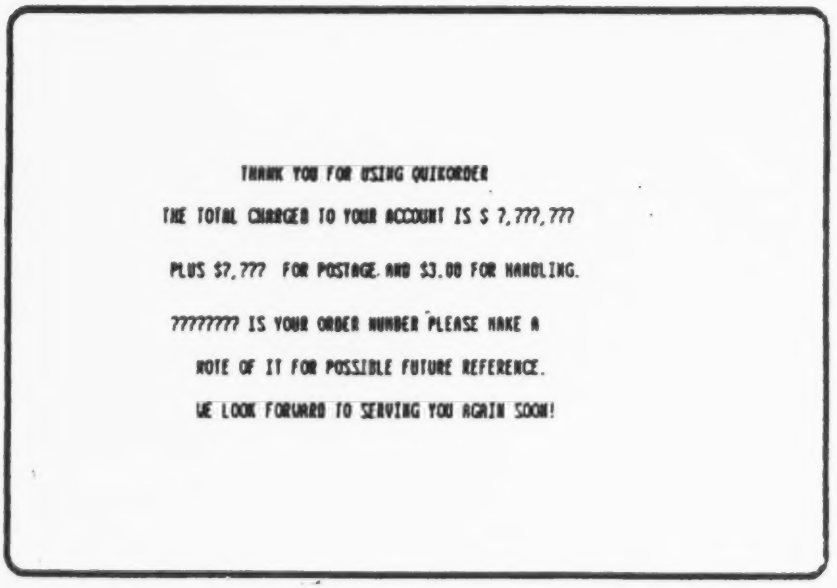
To Log off of the QuikORDER system from either of the order screens:

STEP1: Press the TAB key until the cursor is positioned at the question "DO YOU WISH TO CONTINUE ? (Y)ES OR (N)O _." Enter an "N" and CR.

RESPONSE This action will cause the QuikORDER Selection Menu to be displayed.

STEP 2: Select function code number 4 and CR.

RESPONSE This will cause the log off screen to be displayed. The log off screen displays as follows:


THANK YOU FOR USING QUIKORDER
THE TOTAL CHARGES TO YOUR ACCOUNT IS $?,???,???
PLUS $?,??? FOR POSTAGE AND $3.00 FOR HANDLING.
???????? IS YOUR ORDER NUMBER PLEASE MAKE A
NOTE OF IT FOR POSSIBLE FUTURE REFERENCE.
WE LOOK FORWARD TO SERVING YOU AGAIN SOON!

The information which is displayed at this time include the total dollar amount for the documents you have ordered (to include any Rush Order charges and adjustments for any discounts which may apply), the total postage cost, and a reference number which is unique to your order. It is highly advisable to make a note of this number for future reference.

STEP 1: Enter a CR.

RESPONSE QuikORDER will respond by clearing the screen and returning control to the operating system. The following message will be displayed in the upper left corner of your screen:

LOGON/_____

At this time you are logged off of the QuikORDER system, but not the computer system. At this point you must disconnect your terminal/modem from the telecommunication line. Please follow the instructions given with your modem or telecommunication software package (which ever applies), for disconnecting the telephone line.

Failure to terminate the terminal telecommunication link will result in unnecessary telephone charges to be incurred.

NTIS Order Form

NAME Muhammad R. Hajj TELE# 471-1036

STUDENT X FACULTY ___ STAFF ___ DEPT. C.E. (EWRE)

DATE REQUESTED 17th March 87

DOCUMENTS:

✓	NTIS ACCESSION #'S	3/26/87 REPORT TITLE
✓	1) AD-A138 865/1	Experimental & Analytic Study of the flow Subsonic wind Turrel inlets (AFWAL TR-83-3109)
	2)	
	3)	
	4)	
	5)	

DATE ORDERED 3/17/87

NTIS ORDER CONTROL NUMBER 707690008

DATE DOCUMENTS RECEIVED ___

PATRON CONTACTED ON ___

NOTES:

ADA 1983

Documents will be ordered at Regular Service. Turnaround time will be 2 to 14 days and documents will be delivered to the Engineering Library via First Class Mail.

For RUSH or EXPRESS service, patron must order documents on their own. For RUSH service, call 1-800-336-4700

TIS-117
/78

SAMPLE OF RESOURCES USED TO MEASURE COST OF SRIM PROGRAM

APPENDIX D

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

SAMPLE

CENTRAL SERIALS RECORD
GENERAL LIBRARIES
UNIVERSITY OF TEXAS AT AUSTIN
AUSTIN TX 78712

DEPOSIT ACCOUNT NO. 80514-3

DATE: 06/30/85 PAGE: 1

BALANCE FROM LAST STATEMENT $2,691.45

TO REPLENISH YOUR DEPOSIT ACCOUNT DETACH AND RETURN THIS PORTION WITH YOUR CHECK.

All charges have been posted after shipment. In case of non-receipt of an item, please underline the item on this statement and send a copy to NTIS.
See the reverse side of this statement for an explanation of the subscription acronym appearing in the document shipped column.
NOTE: The amount shown in the "Balance" column is a credit balance (funds on deposit) unless followed by a minus sign, which denotes a debit balance (Due NTIS).

NTIS CONTROL NUMBER	DOCUMENT SHIPPED	CUSTOMER ORDER NUMBER*	SHIPPED DATE	CREDITS	CHARGES	BALANCE
**********	**********		NOTICE	**********	**********	**********
PLEASE CONTINUE TO MAKE YOUR DEPOSIT ACCOUNT REPLENISHMENTS PAYABLE TO NTIS, *						
HOWEVER PLEASE NOTE OUR NEW MAILING ADDRESS FOR FUTURE D/A REPLENISHMENTS ONLY*						
********	NATIONAL TECHNICAL INFORMATION SERVICE					**********
********	U.S. DEPARTMENT OF COMMERCE					**********
********	P.O. BOX 100955					**********
********	ATLANTA, GA 30384					**********
**********	**********		NOTICE	**********	**********	**********
5151	SRIM ISSUE 8512	LS66691	JUN 17 85		507.10	2,184.35
5164	SRIM ISSUE 8513	LS66691	JUN 27 85		460.90	1,723.45

PUBLICATIONS LISTED ON THIS STATEMENT ARE SOLD FOR U.S. USE ONLY. CONTACT NTIS FOR INFORMATION ON FOREIGN PURCHASE ARRANGEMENTS (703-487-4770).

THE FOLLOWING PHONE NUMBERS SHOULD BE USED FOR INQUIRIES ON YOUR ACCOUNT:
(703) 487-4660 INQUIRIES ON SERVICE, ORDERS, AND CHARGES ON YOUR MONTHLY STATEMENT
(703) 487-4770 INQUIRIES ON DEPOSITS TO YOUR ACCOUNT

OPENING BALANCE	TOTAL CREDITS	TOTAL CHARGES	CLOSING BALANCE	
$2,691.45	$.00	$968.00	$1,723.45	CLOSING BALANCE AS OF JUN 30,1985

*Use either your DDC User Code, Purchase Order Number, or User Routing Code.

RECEIVED BY JUL 22 1985

Microfiche Filing Survey

The library is interested in measuring the amount of time spent in all aspects in Microfiche filing and processing. Your participation in this survey is critical in gathering the information needed to support planning in the availability of these materials.

This is not a performance test to evaluate any individual's speed or rate of production. You should proceed with your fiche filing tasks as normally as possible. Any questions, ask Maggie or John.

Activity (check one)

___ Rough sorting and distribution to boxes (in back)
__✓__ Fine sorting
___ Filing (in cabinets)

303 Number of titles (not individual fiche) handled

Timings

Indicate the time (to the minute) you start, and the time you finish sorting or filing the total number of titles you've indicated above. If you are interrupted for any reason not related to "fiche," please quickly jot down a stop time, and when you return write down a start time again.

START	STOP
10:05 AM	10:38 AM

550.9/HR

SAMPLE

Thank you for your participation.

Cost Analysis of Fiche Filing

	ROUGH SORTING	FINE SORTING	FILING		
	383.0	344.0	134.7		
	300.0	556.0	135.7		
	233.4	933.0	147.5		
Fiche Titles	303.0	550.9	151.9		
Processed	388.9	925.7	140.7		
Rates per Hour	368.6	1075.0	146.3		
	373.2	554.1	133.7		
	348.8	763.6	135.9		
	324.0	1182.4	136.3		
	423.0	1330.9	155.0		
	297.2	911.5	158.8		
Mean	340.3	585.0	143.3		
Std. Deviation	54.4	305.2	9.0		
Hours per Fiche/Title	0.0029	0.0017	0.0070	0.0116	TOTAL HOURS OF FICHE HANDLING PER FICH/TITLE
Cost of Act. per Fiche/Title @ $4.50/hr.	$0.0132	$0.0077	$0.0314	$0.0523	TOTAL COST OF FICHE HANDLING PER FICHE/TITLE

FORM
(REV. 9

SAMPLE OF RESOURCES USED TO MEASURE
COST OF NTIS DOCUMENT DELIVERY PROGRAM

APPENDIX E

Please Make Remittance to:

SAMPLE

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
P.O. Box 100955
Atlanta, GA 30384

DEPOSIT ACCOUNT NO. [redacted]

ENGINEERING LIBRARY ECJ 1.3
SUSAN ARDIS
UNIVERSITY OF TEXAS AT AUSTIN
AUSTIN TX 78713

DATE: 03/31/87 PAGE: 1

BALANCE FROM LAST STATEMENT $1,634.51

TO REPLENISH YOUR DEPOSIT ACCOUNT
DETACH AND **RETURN THIS PORTION**
WITH YOUR CHECK

CUMULATIVE YTD CREDITS 95.78

PLEASE SEE THE REVERSE SIDE OF THIS STATEMENT FOR INFORMATION REGARDING YOUR DEPOSIT ACCOUNT.

NTIS CONTROL NUMBER	DOCUMENT SHIPPED	CUSTOMER ORDER NUMBER*	SHIPPED DATE	CREDITS	CHARGES	BALANCE
704100061	AD679383	UNIV OF	MAR 02 87A		6.50	1,628.01
704100061	HANDLING CHARGE		MAR 02 87A		3.00	1,625.01
705490003	PB280485	ENGINEER	MAR 03 87A		6.50	1,618.51
704800252	N7136160	UNIV OF	MAR 03 87A		6.50	1,612.01
704100061	N8119221	UNIV OF	MAR 03 87A		6.50	1,605.51
704990021	HANDLING CHARGE		MAR 03 87A		3.00	1,602.51
704990022	HANDLING CHARGE		MAR 03 87A		3.00	1,599.51
704990021	ADA038143	ENGINEER	MAR 03 87A		6.50	1,593.01
704890011	HANDLING CHARGE		MAR 03 87A		3.00	1,590.01
704890011	PB238856	ENGINEER	MAR 03 87A		6.50	1,583.51
704890011	N7122551	ENGINEER	MAR 03 87A		6.50	1,577.01
704800252	N7626930	UNIV OF	MAR 03 87A		6.50	1,570.51
705790009	SCDR69281	ENGINEER	MAR 03 87A		6.50	1,564.01
704800252	N8318775	UNIV OF	MAR 03 87A		6.50	1,557.51
704800252	AD760681	UNIV OF	MAR 03 87A		6.50	1,551.01
704800252	PB238856	UNIV OF	MAR 03 87A		6.50	1,544.51
704800252	N7510142	UNIV OF	MAR 03 87A		6.50	1,538.01
704800252	N7126610	UNIV OF	MAR 03 87A		6.50	1,531.51
704990022	AD767258	ENGINEER	MAR 03 87A		6.50	1,525.01
705490003	HANDLING CHARGE		MAR 03 87A		3.00	1,522.01
704990021	ADA009735	Y	MAR 03 87A		6.50	1,515.51
704800252	HANDLING CHARGE		MAR 03 87A		3.00	1,512.51
704990022	AD664046	ENGINEER	MAR 03 87A		6.50	1,506.01
704100061	N7729856	UNIV OF	MAR 03 87A		6.50	1,499.51
704100061	N6726003	UNIV OF	MAR 03 87A		6.50	1,493.01
705790009	ADA158637	ENGINEER	MAR 05 87A		6.50	1,486.51
705790009	HANDLING CHARGE		MAR 05 87A		3.00	1,483.51
705790009	ADA161805	ENGINEER	MAR 05 87A		6.50	1,477.01
705790009	ADA090004	ENGINEER	MAR 05 87A		6.50	1,470.51
705790009	ADA089647	ENGINEER	MAR 05 87A		6.50	1,464.01

OPENING BALANCE	TOTAL CREDITS	TOTAL CHARGES	CLOSING BALANCE

This is either your DDC User Code, Purchase Order Number, or User Routing Code.

March 30, 1987

To: Betty Schmidt
From: Susan Ardis, Engineering Library

Betty,

The Engineering Library is doing a cost analysis on one of its services that involves long-distance phone calls. It would be of great help if you would send me copies of long-distance calls made on my authorization code for the period of October 1986 to the present.

Thank you,

Susan

Susan B. Ardis

Billing shows:
Sept - Feb. - 63 calls totalling $62.98

Gail - please Xerox Sept - Jan (4C of Feb. is attached) copies of Susan's memos that I sent to you.

Thanks —

Betty

P.S. Return this sheet with Xc's to her.

THE GENERAL LIBRARIES
THE UNIVERSITY OF TEXAS AT AUSTIN

Austin, Texas 78713-7330

DATE: April 13, 1987

TO: [redacted], Engineering Library

FROM: Mary Seng, Assistant Director for Facilities and Support Services

The attached telephone calls have been made utilizing your long distance access code number. Please check carefully to see that you authorized these calls, sign the statement at the bottom of the sheet and **return to Betty B. Schmidt, PCL 3.234.**

[redacted]

03/02/87	1002	512-684-7029	CULEBRA	TX	6.0	$0.60
03/03/87	1214	409-845-8111	BRYAN	TX	2.0	$0.21
03/04/87	1007	703-487-4500	FAIRFAX	VA	6.0	$0.97
03/09/87	2024	505-526-1047	LAS CRUCES	NM	6.0	$0.59
03/09/87	1414	703-487-4660	FAIRFAX	VA	2.0	$0.35
03/09/87	1132	703-487-4780	FAIRFAX	VA	2.0	$0.35
03/10/87	0822	703-487-4500	FAIRFAX	VA	1.0	$0.19
03/10/87	0825	703-487-4500	FAIRFAX	VA	7.0	$1.12
03/12/87	0853	409-845-9411	BRYAN	TX	2.0	$0.21
03/12/87	0839	703-487-4500	FAIRFAX	VA	7.0	$1.12
03/12/87	0835	703-487-4500	FAIRFAX	VA	2.0	$0.34
03/12/87	0826	703-487-4500	FAIRFAX	VA	8.0	$1.28
03/16/87	0825	212-247-6500	NEW YORK	NY	3.0	$0.50
03/16/87	0836	212-408-9735	NEW YORK	NY	3.0	$0.50
03/17/87	1256	703-487-4500	FAIRFAX	VA	6.0	$0.87
03/17/87	1113	703-487-4500	FAIRFAX	VA	2.0	$0.34
03/17/87	1118	703-487-4500	FAIRFAX	VA	2.0	$0.34
03/17/87	1116	703-487-4500	FAIRFAX	VA	2.0	$0.34
03/23/87	0945	703-487-4500	FAIRFAX	VA	3.0	$0.50
03/23/87	0948	703-487-4500	FAIRFAX	VA	7.0	$1.12
03/24/87	1055	313-986-1159	CENTERLINE	MI	6.0	$0.96
03/30/87	1514	512-342-3667	SANANTONIO	TX	2.0	$0.20
03/31/87	0852	703-487-4500	FAIRFAX	VA	2.0	$0.34
03/31/87	0830	703-487-4500	FAIRFAX	VA	4.0	$0.65
03/31/87	0857	703-487-4500	FAIRFAX	VA	4.0	$0.65
03/31/87	1138	918-592-6000	TULSA	OK	4.0	$0.59
		--- 26	CALLS ---		101.0	$15.33-

E-3

APPENDIX F

THE GENERAL LIBRARIES
THE UNIVERSITY OF TEXAS AT AUSTIN

Austin, Texas 78713-7330

UNIV. OF TEXAS - NTIS CORRESPONDENCE

April 18, 1986

National Technical Information Service
Subscription Department
5285 Port Royal Road
Springfield, Virginia 22161

Dear NTIS:

We wish to make several amendments in our depository account #80514-3. We presently receive all categories of SRIM microfiche through this arrangement. Effective immediately, we wish to cease all shipments of the SRIM, thus cancelling our standing order. However, we do wish to keep the depository open so we may order materials on an individual basis. In addition, shipping and billing should be redirected to:

Susan Ardis
Engineering Library, ECJ 1.3
University of Texas at Austin
Austin, Texas 78713

Finally, purchase order LS66691 should be dropped from the depository documentation. Please effect these amendments at your earliest convenience and confirm them with me in writing. Should you need further information or elucidation, I can be contacted at the address below. Thank you.

Sincerely,

Paul Terry
Serials Acquisitions
The General Libraries
University of Texas at Austin
(512) 471-5348

xc: Susan Ardis
Carolyn Bucknall
John Womack

UNITED STATES DEPARTMENT OF COMMERCE
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

October 1986

Dear Customer:

Thank you for your interest in using the NTIS QuikORDER service. We are pleased that this new service is now ready for use.

QuikORDER makes it possible for Deposit Account customers to place orders via computer terminals. There is no additional charge for this service. If you are not already a deposit account customer, it is necessary to open an account with NTIS. To open an account you merely need to check the box on the enclosed QuikORDER application and include a minimum deposit of $25.00. This deposit will be applied to future purchases.

QuikORDER will save you mail time and you will know in advance whether or not we have the material in the form you want. You will also know the cost, whether or not there are any availability restrictions, and the approximate time until shipment for each item.

Your ordering information is confidential and you will be able to access only that information pertaining to you own Deposit Account. This service lets you see only that portion of the file pertaining to your special combination of Deposit Account number and user password.

Please complete and return the enclosed application form for QuikORDER. Upon completion of the form, NTIS will issue a special password and QuikORDER Users' Guide.

Your interest in and use of this new service is appreciated and we look forward to serving you.

Sincerely,

Ruth S Smith

Ruth S. Smith, Director
Office of Customer Services

Enclosure:
Application form

UNITED STATES DEPARTMENT OF COMMERCE
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

Dear Colleague:

The NTIS/QuikORDER service is an enhancement of our Electronic Ordering Service and will be available October 1. QuikORDER is an online ordering system for NTIS Deposit Account users. To access the system, users simply pre-register with NTIS to obtain a password.

With a password, you will be able to place orders via an asynchronous CRT terminal, saving mail time and knowing in advance whether or not NTIS has the material you want in the form you want. You also will know the cost (plus postage and handling or other fees), whether or not there are any availability restrictions, and the approximate time until shipment for each item.

After your Deposit Account number and password are entered, the system automatically verifies that the Deposit Account number entered is valid, the password entered matches the one assigned to the Account, and the Deposit Account is not overdrawn. Then, a screen with prompts appears so you can enter the order information (document order number, number of copies, type of copy, and an optional users reference number). The system takes each document number and matches it against the Master Inventory File.

The system will display the title of the document for verification by the user. After verification, the system will check availability of the format requested (microfiche, paper, etc.), restrictions on distribution (if any), type of stock available (shelf stock or blowback), and price of the document. At any point you can decide if you want to order the document.

To request QuikORDER application form, write the NTIS Accounting Division, attention: Dawn Riddle. Upon receipt of your application form, NTIS will issue a special password and Users' Guide.

Sincerely,

Ruth S. Smith

Ruth S. Smith, Director
Office of Customer Services

I'M IN THE PROCESS OF SETTING US UP FOR THIS ENHANCEMENT.

UNITED STATES DEPARTMENT OF COMMERCE
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161
OFFICE OF THE DIRECTOR

December 12, 1986

Dear NTIS Customer:

We are pleased to report to you on the condition of the National Technical Information Service (NTIS) as we enter 1987. The condition of NTIS is healthy. We continue to expand the breadth and quality of NTIS products and services.

This past year we have continued our initiatives to bring to you better service. Introducing first class mail at the beginning of 1986 has expedited the delivery of your orders. Developing the QuikSERVICE system has made it possible for you to place your orders online and to check their status at no additional cost to you. Improving the processing of your orders for paper copy reports which must be printed from microfiche has resulted in cutting two days off the turnaround time. Establishing the "HELP Desk" and database training program has increased the proficiency of those of you who search the NTIS Bibliographic Database.

Looking to 1987, we have a full agenda of further enhancements. Restructuring our accounting systems will speed up the handling of your financial transactions such as posting to your deposit accounts and simplifying the invoices you receive. Expanding our telephone coverage will make it easier for you to place your orders. Improving the QuikSERVICE system will give you hints on new documents in your field of interest in advance of public announcement.

Consistent with our mandate to be self-supporting, we have collected revenues in 1986 to pay the costs of the services we provide. Further, we have prepared our program and financial plan for 1987 consistent with this mandate and with our commitment to further improvements in our service to you. The success of this plan will depend on achieving projected workloads in accordance with the enclosed 1987 Price Schedule. This schedule shows modest price increases for our paper copy, microfiche, and magnetic tape products with the prices of all other products continuing level.

During 1986, we spoke with many of you about your perceptions of the quality of our services and the use of our products. We asked for your ideas on how we could better meet your needs as our customers. Your perceptions and ideas have influenced our 1987 plan. Let me extend to you a continuing, open invitation to give us your ideas and suggestions by contacting one of our product managers named on the enclosed list.

In closing, I wish for all of us a successful 1987. I thank you for this opportunity to report on our condition, to inform you of our services and prices, and to ask how we may better serve you.

Sincerely,

Joseph F. Caponio

Joseph F. Caponio
Director

Attachments

APPENDIX G

FILL RATE SURVEY INSTRUMENT AND
SAMPLE NTIS CITATION

March 30, 1987

To: Susan
Larayne
Maggie
Tim
Boon
Hua

From: John B.

Please help me conduct an availability survey by asking patrons who are using or who are about to use the NTIS files to fill out a copy of the attached form. I intend to run the survey period for the next four weeks, and would like to gather as much data as possible.

I will supply the front desk, reference desk, and the tops of the NTIS file cabinets with the survey forms. Please review the form and direct any questions you might have to me.

Thanks for your help.

NTIS SURVEY

The Engineering Library seeks to improve the availability of NTIS reports to its users. Please assist the library by filling out the following survey. If you look for NTIS reports frequently, it would be greatly appreciated if you would take a moment to complete the form each time.

1) Please check one: ☐ Faculty ☑ Student ☐ Staff ☐ Courtesy Borrower

2) If Faculty, Student, or Staff, please indicate which department you are associated with: CE

3) Total number of NTIS titles sought -- 2

4) Total number of NTIS titles found in the library -- 1

5) Of reports **found** in library, list the YEAR of report and first 5 letters of report #.

	YEAR	LETTERS		YEAR	LETTERS
1)	Feb 80	PB81-202723	5)		
2)			6)		
3)			7)		
4)			8)		

6) Of reports **not found** in library, list the YEAR of report and first 5 letters of report #

	YEAR	LETTERS		YEAR	LETTERS
1)	Feb 77	ADA038444/6ST	5)		
2)			6)		
3)			7)		
4)			8)		

Please return form to the front desk when completed.

Thank you very much for participating in this survey.

PRINTS User U0016585 21Oct85 PRINT 1/5/1

DIALOG File 8: NTIS - 64-85/ISS21 (Copr. NTIS)

1015998 DE83014717 ←

Developments in Eddy-Current Computation with Eddynet

Turner, L. R.* ; Lari, R. J.

Argonne National Lab., IL.

Corp. Source Codes: 001960000; 0448000

Sponsor: Department of Energy, Washington, DC.

→ Report No.: CONF-8305103-1

1983 4p

→ COMPUMAG conference on the computation of electromagnetic fields, Genoa, Italy, 30 May 1983.

Languages: English Document Type: Conference proceeding

NTIS Prices: PC A02/MF A01 Journal Announcement: GRAI8401; NSA0800

Country of Publication: United States

→ Contract No.: W-31-109-ENG-38

The eddy-current computer code EDDYNET has been modified to incorporate 2 pi /n symmetry, specification of current-crossing boundaries, a polar mesh generator, calculation of current density and temperature rise, calculation of forces and torques, a mesh with multiple sheets, and fields and fluxes from filamentary current rings. It has been successfully applied to find the forces and temperature rise of a conducting flat plate in a pulsed magnetic field and the currents in a hollow conducting torus. (ERA citation 08:044440)

Descriptors: *Eddy Current Testing; Data Analysis; Computer Codes; Current Density; Mesh Generation; Modifications; E Codes; FELIX Facility

Identifiers: ERDA/420500; NTISDE

Section Headings: 14B (Methods and Equipment--Laboratories, Test Facilities, and Test Equipment); 9B (Electronics and Electrical Engineering--Computers); 94J (Industrial and Mechanical Engineering--Nondestructive Testing); 41G (Manufacturing Technology--Quality Control and Reliability)

Fig. 7.5. The same record from the NTIS database as it appears in an offline print from DIALOG.

A TYPICAL CITATION FOR AN NTIS DOCUMENT. NOTE THE MANY POSSIBLE NUMBERS IT COULD BE FILED UNDER. USERS FREQUENTLY REQUIRE ASSISTANCE

APPENDIX H

Interview with Susan Ardis,
Head, McKinney Engineering Library

The following report is based on an interview given by Susan Ardis on April 1, 1987:

History of the technical report collection at the McKinney Engineering Library

- The current technical reports collection is a composite of 3 collections : NTIS, AEC-DOE (Atomic Energy Commission, Dept. of Energy), and NASA.

- Began as a collection of AEC reports immediatley following WWII, and was originally housed in the Chemistry Library. It was moved to the Physics, Math, Astronomy Library before landing in the Engineering Library around 1976.

- NTIS documents were acquired during the years 1982-86 as the library established a standing order through NTIS SRIM distribution. The total budget for NTIS was cut as part of a mandated serials cutback in 1986.

- NASA and DOE reports are still being received directly from those agencies.

On the changes made to the user-determined SRIM profile over the years

- Category selections were expanded to include more Mechanical, Operations Research, and Electronics/Computer classes, and Robotics subject areas were retrospectively purchased.

- NTIS profile was re-specified to prohibit NTIS from sending the same reports that were being directly delivered to the library from NASA and DOE.

Collection development

- The effectiveness of a collection building approach to providing technical reports has been suspect for awhile. Considerations of shifting to an on-demand order service has long been considered.

- Considerations of selecting by issuing agency rather than by subject category through NTIS has been contemplated as a means to satisfy more patrons. "NASA, DOE, and EPA reports are key to greatest satisfaction." This philosophy has, in part, already been adopted in the receiving of reports directly from DOE and NASA over the past several years.

- Retaining the massive, space-consuming collection in its entirity is being evaluated against other demands on the prime space it occupies. The need to "tighten and narrow the collection" has for a long time been under consideration.

On the users of the collection

- With a few exceptions, seekers of technical report literature are usually those who have done computerized-literature searches of the NTIS or Aerospace databases. Citations for technical report literature are minimally represented in the mainstream literature and indexing sources, and therefore stand a small chance of being heavily sought.

- Students of the ME 366K Senior Design Mechanical Engineering class are heavy seekers of technical reports, due primarily to the heavy computerized-literature searching they do.

- There is little use of the collection by faculty.

- During periods of greater national emphasis on alternative energy technologies, the collection was used more heavily, and with perceived greater fill rates.

QuikORDER Turnaround Times

-- from an interview with Chris Hartung, NTIS Office of Computer and Communications -- April 3, 1987

Regular Service

Upon receiving an on-demand request for document, NTIS will produce the document and get it into 1st Class Mail within :

-- 3 days for shelf-stock items.
-- 5 days for items requiring reproduction from a master copy.

RUSH Service

NTIS guarantees to get the document requested into 1st Class Mail within 24 hours of receiving the request regardless of whether it is shelf-stock or needs reproduction.

Express Service

RUSH handling with Federal Express or equivalent delivery; guarantees over night delivery.

Evaluation of Methods to Provide NTIS Documents at the McKinney Engineering Library: Status Report (April 13, 1987)

Project Summary:

In Fall 1986, the Engineering Library received a drastic, mandated cut in the acquisitions budget for the purchase of NTIS technical reports. The technical report collection would not be supported in the manner it had for several years. On the other hand, the Engineering Library's role in supplying could not be halted either. Engineers are dependent on the special type of information conveyed through them.

In response, the Engineering Library opted to introduce document delivery for technical reports not available at the library, nor expected to arrive as part of large collection purchases for the library. At the time this decision was made, library management could only perceive that the per title acquisition of an NTIS document on an on-demand basis would be much more than the per title cost of the documents in a bulk purchase arrangement. It has been, however, anecdotally observed that demands on the collection are so sporadic and diverse that document availability at the library may be less than adequate. Given the volume of reports that NTIS distributes annually and given the limited resources the library had to select with, it has been considered that accurately anticipating need in this situation may nearly be an impossible task.

The main goal of the evaluation project is compare two methods of providing NTIS documents to patrons at the Engineering Library. What is the most cost effective method of providing NTIS documents at the Engineering Library? At the heart of the evaluation will be side-by-side direct cost analyses of both approaches. This will be aligned with usage rates and, finally, the cost of fulfilling all needs for NTIS documents annually. Since the collection will cease to grow under current funding, an attempt will be made to model the impact of a no-growth collection on the future demand for document delivery.

Current Project Activities:

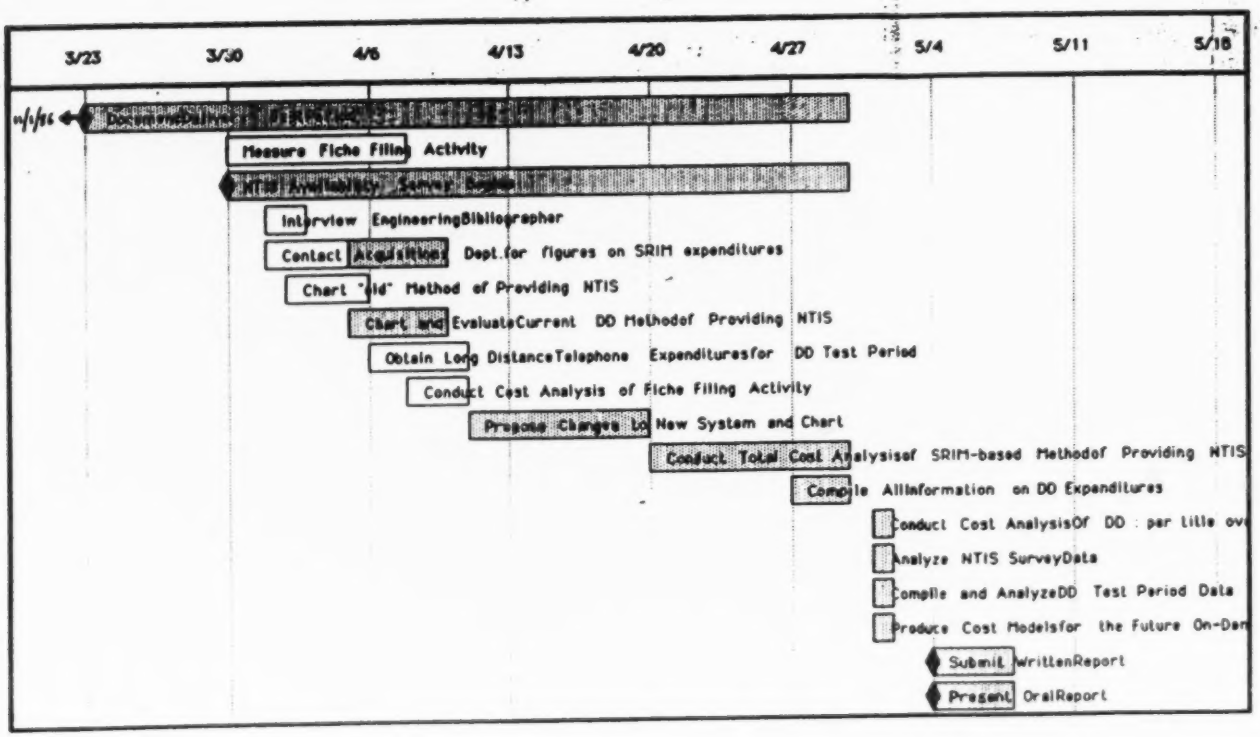
- NTIS document delivery test period has been running since Nov. 1986; cost, frequency, and document type data is being collected from these activiites.

- Cost data from "old" selection method is being assembled; fiche filing activity has been measured and cost-factored.

- Document delivery procedures are being charted, and evaluated for improvements and enhancements.

- NTIS availability survey has been running for the past two weeks and will continue to the end of the month. Thsi survey intends to document the availability effectiveness of the NTIS collection as it has been supported by bulk collection purchases.

- Data from test period records and availability survey is being assembled for future demand/cost models.


3/23
3/30
4/6
4/13
4/20
4/27
5/4
5/11
5/18
Measure Fiche Filing Activity
Interview EngineeringBibliographer
Contact Acquisitions Dept.for figures on SRIM expenditures
Chart "old" Method of Providing NTIS
Chart and EvaluateCurrent DD Methodof Providing NTIS
Obtain Long DistanceTelephone Expendituresfor DD Test Period
Conduct Cost Analysis of Fiche Filing Activity
Prepare Changes to New System and Chart
Conduct Total Cost Analysisof SRIM-based Methodof Providing NTIS
Compile AllInformation on DD Expenditures
Conduct Cost AnalysisOf DD per title ov
Analyze NTIS SurveyData
Compile and AnalyzeDD Test Period Data
Produce Cost Modelsfor the Future On-Dem
Submit WrittenReport
Present OralReport